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OCTOBER, 1965

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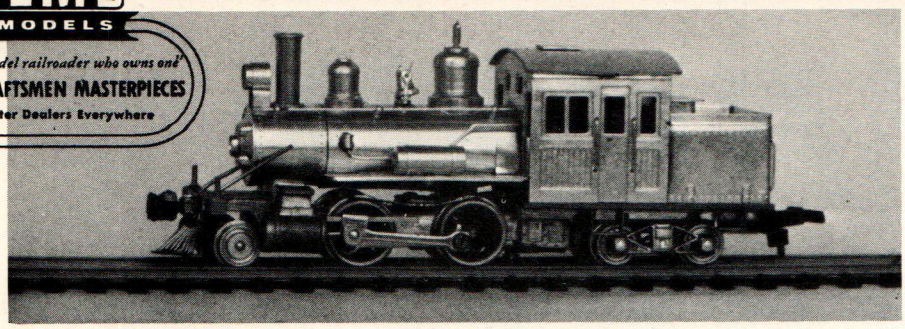

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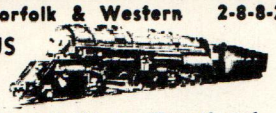

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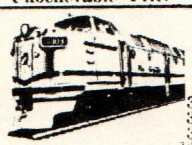

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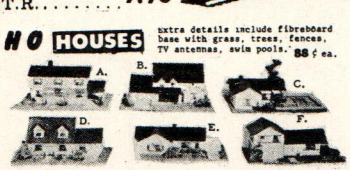

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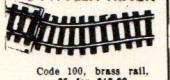

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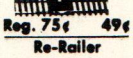

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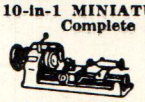

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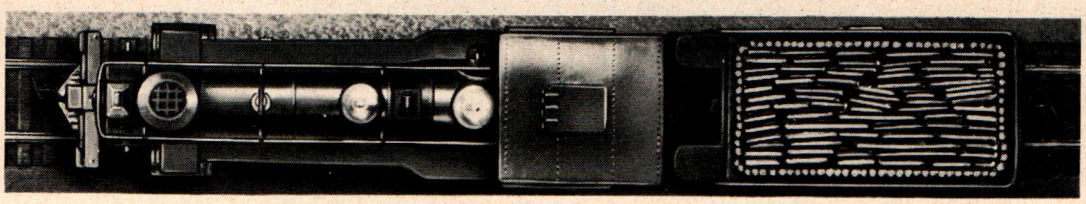
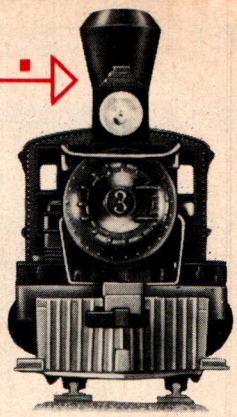
look at it head on . . .

view it from the top . . .





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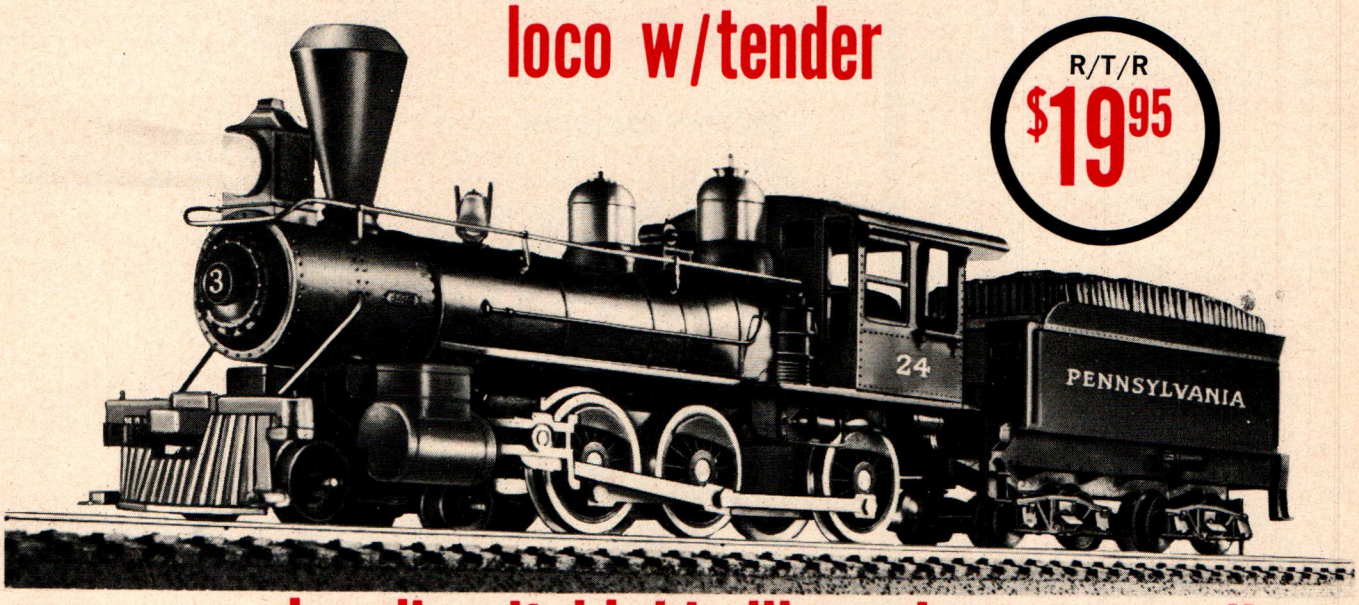

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NOTES ON AN OLD TIMETABLE

WITH THE fall season here, model railroading is taking off full swing and indications are it will be the best year in some time. Hobby dealers are stocking up on new items like they haven't done in some time. Well worth a look-see. There are also loads of model club shows, regional conventions, fan trips, and train collecting meets around the country. They're great for getting the old enthusiasm fired up

As this is written, we're pushing hard to get everything wrapped up before heading for the NMRA's big blast in Vancouver. With a little bit of luck in timing we should bring back a full report on the activities in B. C. in time for the November issue.

We also hope by next month to take the wraps off another project we've been working on for many, many months. It's the latest in our book line and includes a lot of material we feel will be welcomed by the modelrail. Watch the announcement in RMC next month, or surely December.

We've packed in some interesting plans this month: Alco's giant 5500 hp. Century 855, Baldwin's delightful A and B freight units, and that long Magor Car Company pulpwood car, which has already been made into an excellent Ambroid kit. There also are plans in all of the currently popular scales for the D&H No. 10 single truck caboose with a trainload of detail photos plus an announcement of a contest on building the car. This car was used in organizing the Brotherhood of Railroad Trainmen and the BRT is the sponsor of the contest, working through NMRA. Incidently, some comments by BRT president Charles Luna in regards to treatment of railfans and model railroaders by both the railroads and railroad men is provocative. Much of what Luna says is all too true though it is also true that railfans have at times endangered themselves on railroad property and at other times have practically walked off with complete locomotives. We do agree that the railroads have not really tapped the fans as a valuable ally and public relations tool. Considering the many problems faced by the carriers, it should be worth their while to do so.

Hal

OCTOBER, 1965 Vol. 34, No. 5

RAILROAD MODEL CRAFTSMAN

Including TOY TRAINS combined with ELECTRIC TRAINS and HOBBY RAILROADING, MINIATURE RAILROADING, MODEL & RAILWAY NEWS, THE O GAGER, and THE MODEL MAKER (Est. 1924) Magazines.

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THE COVER

Delaware & Hudson Caboose No. 10 has been preserved in a quiet Oneonta, N.Y. park. In 1883 the caboose was used in organizing what is now the Brotherhood of Railroad Trainmen. Additional photos and plans and content information appear on page 36. Extachrome by Burns Bros., courtesy BRT.

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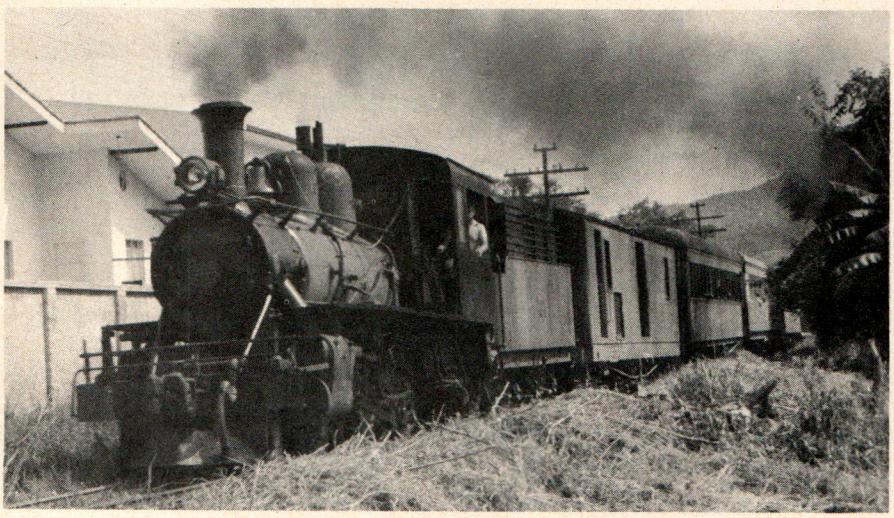

Santa Catarina Railroad No. 108, a 1940 vintage Baldwin 4-6-0, ex-EFGoias, with the afternoon passenger run. Pike is meter gauge.

Brazilian Narrow Gauge

The railbus shown on page 4, May 1965 RMC, belonged to the abandoned Palmares do Sul—Osorio RR, 60 cm. gauge (1'11⅝"). The car was equipped with a Buick motor. The line had another identical railbus but powered with a Ford Model A motor.

Santa Catarina RR is still operating under steam, mostly Baldwin, passing some 200 ft. from my home. I enclose a photo showing No. 108 in action. The line is meter gauge (3' 3⅜").

J. O. Berner
Caixo Postal 35
Blumenau, SC, Brazil

S. P. Mogul

Just finished reading Jeff Winslow's letter in the August Safety Valve. The SP Mogul in question is an M-10, as seen on page 108 of Dunscomb's A Century of S. P. Steam Locomotives. This was the only major class of S. P. 2-6-0's to have Walschaerts valve gear besides the M-21. Class M-19 (3 locomotives) and class M-20 (one loco) also had Walschaert valve gear. The model of the M-10 was first imported by Con tinental Models and later by International. The current detailed version is offered by Gem.

Robert L. Semichy
246 Garden Hill Drive
Los Gatos, Calif. 95030

Lionel Freight Cars

I was a little disappointed with the Lionel O gauge freight car series you've been running since you didn't follow up with the 650 and 2650 series.

Actually the 650 and 2650 series were introduced in three stages. The last year that the 803 series appeared in the catalog, there also appeared a set with the 259E loco and four 650 series cars. The following year, four more cars were added to the series. Several years later two more were added which had no 803 series counterparts. These were the 620-2620 floodlight cars and the 2660 derrick.

James A. Robison
4 Whitehall Lane
Garden City Park, L. I., N. Y.

We expect to treat the 650-2650 series, as well as the 2800 series, at length in early issues. Ed.

Long Island Rail Road Fans

I have been reading RMC since 1936, so I qualify as a real old timer. In light of this, I beg a boon!

I have been an avid fan of the LIRR since I could toddle and the August treatment by Jeff Winslow was just fine, but! I would love to see a real bang-up treatment by the Layout Doc on the country's largest commuter railroad: a real whopper of a plan of the fantastic Jamaica-Morris Park complex, together with

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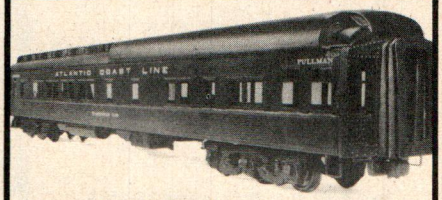

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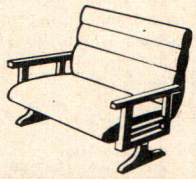

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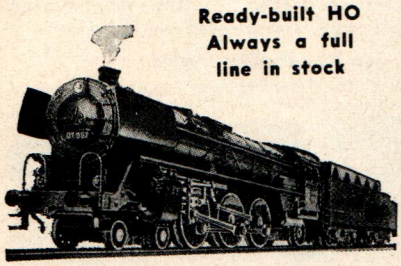

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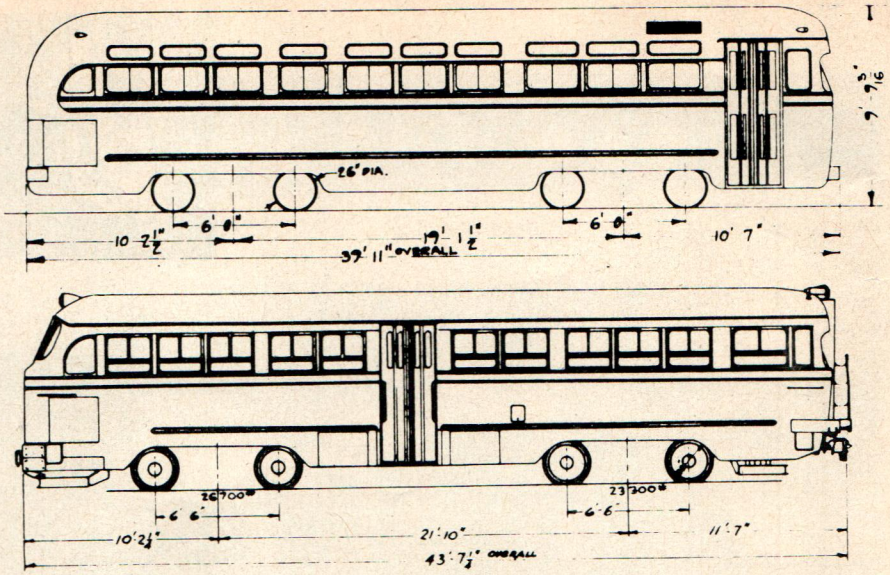

The two NYNH&H diagrams show both types of FCD cars built by Mack. The earlier unit, No. 10 was built in 1952. The later 11-19 series were built in 1954. Second series would operate in coupled pairs.

a dandy construction article explaining how to make the MU cars in mass quantities.

Really, the road is a wonderful one to model, especially if the era before 1955 is taken, so that electric, steam and diesel could all share the stage at Jamaica and points east.

And I'd like to hear from all LIRR fans in this area, regarding formation of a Long Island Rail Road model club.

Stanley M. Smith
1710 North Avon Street
Burbank, California 91505

Best bet for mass construction of cars would be to find unfluted streamlined shorty coaches, drill in porthole end-windows and grind off any fish bellies. Or buy a few yards of Northeastern arch roof and car flooring, plus Walthers coach and combine sides, LIRR MU cast ends, plus trucks and couplers, and needed underbody details. Have fun. Ed.

New Haven's Railbuses

Note that New Haven No. 10 was the experimental version and quite different from the New Haven's other Mack rail buses. Nos. 11-19 had doors in the middle and could be coupled in pairs. I understand the New Haven sold them to private concerns, with two going to Sperry Rail Car Service.

The Mack cars were used extensively on the Providence-Worcester branch prior to the October 1955 washout, and on the Old Colony Boston-Fall River lines prior to curtailment of service. I remember No. 10 as being colored green but Clark A. Benson says his photos show them colored blue.

Paul B. Boivin, Jr.
New Haven TIA, Inc.
319 So. Orange Ave.
Livingston, N. J. 07039

Paul is executive secretary of the New Haven Technical Information Assn., a fan group devoted to gathering facts and data on the NYNH&H. The confusion on coloring of so recent a product by two avowed experts points up the need for using only the best in color films and color processing. Unstable color films and poor processing could make a green car blue in a slide or print, especially if

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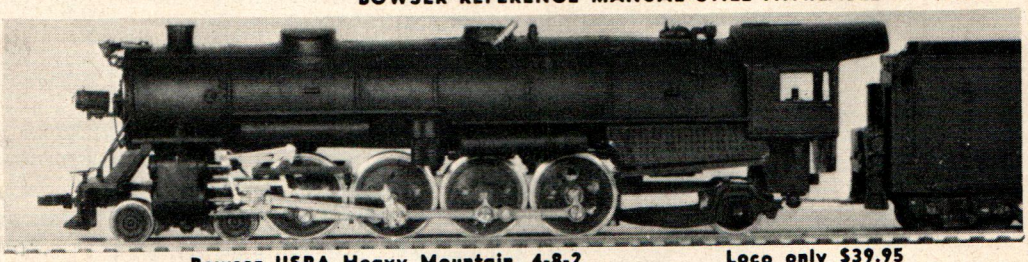

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the yellow should fade out, as can happen. Ed.

More Data on the New Haven FL-9

I thought RMC readers might be interested in more data on the New Haven's FL-9 (RMC Aug. '65 p. 31 plan). These locos were built in two batches: class EDER-5 and ERER-5a. The wheel arrangement is B-A1A with the lead truck an EMD flex-coil design and the second a modified SD type with center idler axle. A third rail pickup show should be shown on the lead truck, as on the rear truck.

Class EDER-5 consists of 30 units, nos. 2000-2009, each of 1750 hp. and identical with the plans. Class ERER-5a also numbers 30 units, nos. 2030-2059, each of 1800 hp. These latter have dynamic brakes, and the roof pickup show shown as (A) on the diagram. This is used in the New York City tunnels where long gaps occur in the third rail, such as through complicated switchwork. These last units rely on their diesel power should they stall in these sections.

The FL-9 is used as a straight diesel-electric in either non-electrified or New Haven electrified zones but upon reaching the tunnels, the diesel is shut down and the locomotive becomes a straight electric.

Ralph V. Balfoort
918 Ackerman Avenue
Syracuse, N. Y. 13210

Train Set Consist

Although model railroad manufacturers seem to aim train sets at newcomers in the hobby, there is no need for the unprototypical qualities of sets on the market today. Nearly all HO sets, and other sizes as well, appear to represent a sampling of the manufacturers' products, with each given number of freight or passenger cars.

A quick look at any line will show that while there may be variety, some type of car dominates. In every part of the country almost solid trains of box cars are frequent. Consists dominated by log, hopper and tank cars are also regional occurrances.

On passenger runs, trains of head-end equipment and others of coaches are most common.

Besides reviewing the types of cars dominating train consists, the off-line and home railroad ownership of equipment should be considered. Although freight trains present a spectrum from ATSF red to UP yellow to NYC green, the home line usually dominates with at least 50% of the cars. In passenger service the off-line cars represent a much smaller percentage. Foreign mail and Pullman cars are not at all rare. Some through Pullmans present a variety of color every day on certain trains.

Now, how do the above facts match the current practice is assembling train sets? As mentioned above, freight sets include one car each of

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several types. Little attention seem to be given to the inclusion of on-line cars in the consist, except in the case of passenger sets where this writer has yet to see an off-line car. Another unprototypical practice in passenger sets is choosing either all streamline or all standard cars. Other than a few top name trains, most passenger runs are a mixture of heavyweight and modern equipment. Mail and express trains are also lacking in sets.

How can the above descriptions of prototype trains become tomorows sets? Only when the buyer is looking for a model train rather than a toy train will the manufacturer change his compilation of rolling stock.

Gilbert M. Hulin
4891 Donald Street
Eugene, Oregon 97405

Train set manufacturers are usually attuned to their market. They provide one of each type because that is what 99% of the train set buyers want. Anyone wanting a solid string of hopper cars or reefers or cattle cars will find his dealer's shelves bulging with a wide variety of cars in many sizes, shapes and colors. Similarly the modeler wanting a model railroad roster crammed full of Soo Line, Great Northern, or Santa Fe will only be able to start his collection with RTR cars. The rest will have to be built from kits or from repainted RTR cars, with decal lettering. Manufacturers who have had specialized train sets of hopper cars, etc., have usually dropped them after a year or two, indicating that sales were not up to snuff. And another manufacturer who offered some 70 or so train sets a few years back in an attempt to please everybody went bankrupt. Ed.

The New Generation

Congratulations on the fine improvement to an already fine magazine. The new paper increases the appearance 100%.

In case anyone is interested, I am a 15 year old Hammer Happy Brat. I would like to hear from any other modelers my age to exchange ideas.

Jon Raymond
433 12 Ave. No.
East Grand Forks, Minn. 56721

With those kind words thrown our way, he can't possibly be Hammer Happy! Ed.

Reversing At Speed: Don't

There is one point overlooked in the reply regarding quick reversing (RMC Aug. '65 p. 50).

A motor operating normally is a self-regulating device. Acting as a generator, it produces "back E.M.F." opposing the voltage on the track, thus keeping the current within reasonable limits. Sudden reversing while the motor is running causes the back E.M.F. to *add* to the voltage from the power pack, and allows a momentary surge of excessive current. The result is a strong magnetic field tending to demagnetize or "knock down" the

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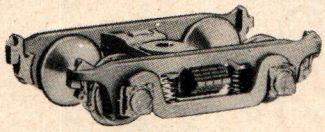

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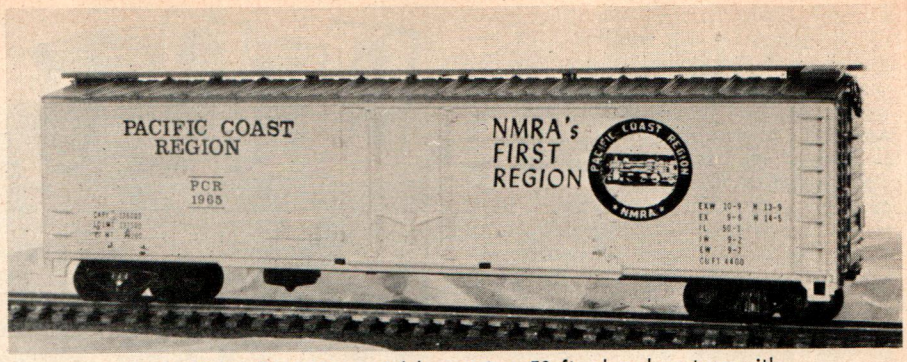

Pacific Coast Region's special boxcar is a 50 ft. plug door type with yellow sides and tuscan ends. Lettering is blue and white. PCR offers them at $3.00 per kit while supply lasts, less trucks and couplers. Available from Bill Courtney, 10885 Santa Monica Blvd., Los Angeles, Calif. 90025. Car has universal coupler pockets.

field magnet, which then stabilizes at a point lower on the demagnetization curve than before. The seriousness of the change varies with different magnet materials, width of airgaps, and the degree of magnetization in the first place. Some motors show little or no harmful effects. Others will show a marked reduction in torque.

Armature burnout is another possible result of this practice. My advice is: Don't Do It!

Robert L. Miller
The Robert L. Miller Laboratory
900 N. Washington St.
Valparaiso, Indiana

That's what we said too: Don't Do It! Ed.

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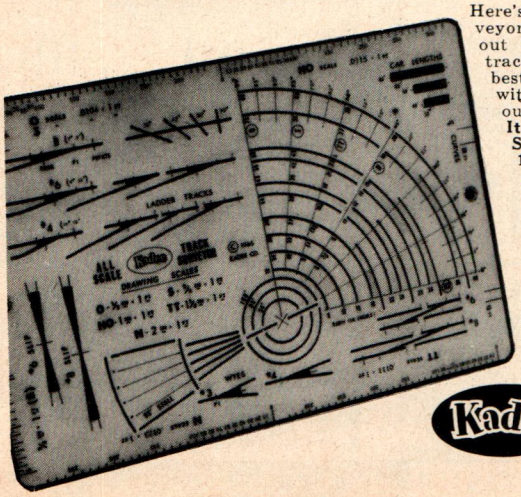

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DISPATCHERS REPORT

THE NEW items are starting to pour into hobby shops as the fall season gets into full swing. Regional meets, model club shows, and fan trips are all stirring up activities designed to make you get the old pike rolling full speed ahead.

Athearn has pulled a whole trainload of surprises and we suspect that there will be a second section right behind and we'll let you guess as to what might be on the head end. Athearn is shipping new merchandise now and your dealer should have a good stock on hand.

W. K. Walthers has a new kit of an 8-section buffet-lounge solarium Pullman car used by the Atlantic Coast Line and now owned by the Atlanta chapter, NRHS. Kit is offered in O scale at $11.95 less trucks. Interior detail kits are extras.

Cary Locomotive Work's Don Stromberg, Rte. 2, Box 50, Cary, Illinois 60013, dropped in for a visit with his family and a trunk full of new and old Cary releases. Pennsylvania fans especially will be thrilled with the boiler for the K-28 Pacific, similar to the K-2 boiler but without a firebox and a few other minor changes. Seems to us this boiler might prove to be useful for a few other non-Pennsy locos. Not yet ready for production but probably available in early winter will be Cary's first complete loco kit for a very tiny all-service steam loco of about 1890 vintage: old enough to have all kinds of atmosphere and new enough not to look out of place next to an F-3. This one can be souped up into a hundred different prototypes. Suggest you watch the Cary ads for this little gem. We've already ordered a kit. Its a dream.

Another source of HO standard type passenger cars including NYC, Pennsy, and N&W, is *J-C Models*,

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1237 40 ft. boxcar kit, Western Pacific — $2.19

1320 50 ft. double-door boxcar kit, Frisco — $2.39

1321 50 ft. double-door boxcar kit, Louisville & Nashville — $2.39

1629 50 ft. mechanical refrigerator car kit, Safeway — $1.98

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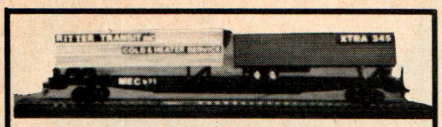

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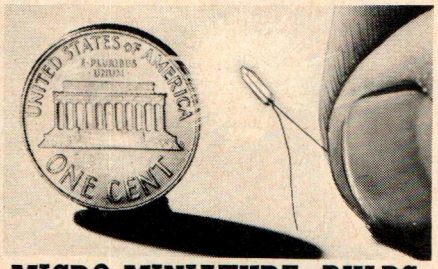

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Box 645, South Bound Brook, N. J. 08880. Their catalog illustrating the complete J-C line is available for 20c and please mention RMC when ordering. J-C kits have sharply embossed aluminum sides.

Diesel fanciers should also send a stamped self addressed envelope and a dime for a *Hobbytown of Boston* instruction sheet, 46 Boylston St., Boston, Mass. 02116. Among Hobbytown offerings are die cast EMD E-7 A and B passenger units, Alco 2000 hp. passenger diesel, 1600 hp. Alco road switcher, and the Baldwin sharknose diesel. 50c brings a complete set of instruction sheets.

Another must catalog for HOers is the *Cal-Scale* folder (15c), P. O. Box 475, Pinedale, California. It's loaded with lost wax and plastic locomotive and car parts that'll lift even the economy priced kits into the custom category.

If you're puzzled as to track, send for *Tru-Scale's* catalog (25c), at San Dimas, California. The catalog describes several types of Tru-Scale track and roadbed including plain wooden roadbed suitable for use with Atlas or K&B or other brands of sectional or flexible track; Tru-Scale milled wood roadbed in which the modeler lays his rails into pre-gauged grooves which simulate tie plates and Ready-Track which has creosote stained ties, nickel silver or brass rail, and ballasted embankment all ready to put down.

Associated Hobby Manufacturers is also releasing new items right and left. A sample of the new Berkshire has arrived and is undergoing testing now, performing beautifully thus far on 18 inch curves. AHM has also unveiled its 80 ft. standards in Pennsylvania lettering and tuscan paint. Not yet received are the interior detailed deluxe cars. The Krauss Maffei diesel is now offered in powered A-dummy A combinations with either D&RGW or SP coloring at $15.95 per set.

Also new at AHM is a trolley bus (Minibus) set in HO, ready to hook up with trolley wire provided. Bus design is very similar to U. S. trolley buses of the early 1940 period as used in many cities, and including the all-service type.

AHM's HOn2½ line is also coming in. Detail and wheel gauging on the tiny Plymouth and 0-4-0 saddle tank are unbelievable. Should give tremendous impetus to HOn2 modelers though we suspect that most modelers will stick with the slightly wider gauge to take advantage of commercial trucks and wheels sets.

Canadian modelers in all gauges will also be interested in *Paul Raham's* catalog at $1.00 (Canadian), 4 McGowan Rd., Scarborough, Ontario. Paul specializes in S gauge but carries all gauges.

Another new outfit is *Smooth Side Models*, P. O. Box 128, Blythebourne Sta., Brooklyn, N. Y. 11219. Smooth-side is scheduling over 100 different smooth side streamlined passenger cars and they've just released their first: an 85 ft. Union Pacific sleeper "American Sentry." These HO kits list at $6.95 less trucks and couplers ($6.50 in unpainted version). Full width operating diaphragms also available at 90c pair. Smooth Side has literature on the line which they'll send if you send them 25c. We hope the Erie and Lackawanna fans write in stating their preferences, before everything is painted N&W tuscan.

And *International Models* has its new 000/N Handbook out packed with photos, equipment data, track plans, and other 2mm. information. 75c brings it to you: address 33 Union Square West. New York, N. Y. 10003.

New York Hobby Show

The first annual National Hobby, Craft and Leisure Time Show will be held at New York City's Statler-Hilton Hotel, October 22-24. This is the first show of its type to be held in New York in many years. All types of hobbies will be represented including model building hobbies such as model railroading. Among the attractions will be a series of lectures and clinics on a wide variety of hobby subjects. Among the planned exhibits are model railroading, old toys and other antiques, old Americana, and other hobbies of interest to railfans and toy train collectors. Other displays will be devoted to stamps, airplanes, pewter, war relics, ships, motoring, etc. Sponsor of the exhibit is Industrial Exhibitions, Inc., 17 East 45th Street, New York, N. Y. 10017. Further announcements regarding the show are planned for area newspapers, radio, and television.

Among the events at the 1st National Hobby Show at the Statler-Hilton Hotel, Oct. 22-24, will be a model railroad contest, broken down into three specific categories:

Category A—Models built by the entrant. Models can be any scale or gauge, and any railroad subject.

Category B—Custom built model railroad contest. For the finest model entered, regardless of builder.

Category C—Unusual model contest, for the most unusual model entered, including old toy trains.

There will be three prizes awarded in each category: 1st, 2nd, and 3rd. Judging will be by a three man team including the editor of Railroad Model Craftsman. Decision of the judges is final. Models must be brought to the show on Sunday by 2 p.m. and are to be removed following the judging. Do not mail entries to either the Hobby Show or Railroad Model Craftsman. No preliminary registration is required.

Lounge Car

Bruce Walthers advises that the Don Fowler slow motion accessories are again available through *W. K. Walthers, Inc.*, 1245 North Water St.,

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5002	Sante Fe*	5005	Union Pacific
5003	Illinois Central*	5006	Baltimore & Ohio

●PASSENGER CARS. October.

6263	Sante Fe Diner	$3.50
6270	Pa. Pullman	3.50
6271	Pa. Observation	3.98
6272	Pa. Combine	3.50
6273	Pa. Diner	3.50

●DELUXE PASSENGER CARS. October.

6360	Sante Fe Pullman	$6.98
6361	Santa Fe Observation	7.98
6362	Santa Fe Combine	6.98
6363	Santa Fe Diner	6.98
6370	Pa. Pullman	6.98
6371	Pa. Observation	7.98
6372	Pa. Combine	6.98
6373	Pa. Diner	6.98

●MINIBUS SET. October.

4100	Trolley Bus	$8.95
4111	3 Poles	1.49
4112	2 Terminal Poles	1.29
4115	Pair of Wires	.10
4117	Crossing Section	1.29
4120	Remote Switch	3.98
4132	Wire Curver	.89

●7" RECORDS. In stock now. 99c. each.

9501	Iron Horse Rambles	9506	Burlington
		9507	Steam On
9502	Grand Trunk Western		The Horseshoe
		9508	The Hawk
9503	East Broad Top		Mountain Line
9504	Ride Down Memory Lane	9509	Knee High Steam
		9510	Sounds of #60,000
9505	Strasburg Railroad		

●MINITRAINS. October.

2101	4" Straight Track 2½ ft. (7)	$ .98
2121	7" Radius Curve Track (7)	.98
2130	7" Rad. Curve Terminal Track (12)	4.60
3001	0-4-0 Plymouth Diesel "JDT"	5.95
3011	0-4-0 Baldwin Steam Loco	6.95
3101	Dump Car w/1 Straight Track	.98
3102	Cement Car w/1 Straight Track	.98
3103	Log Car w/1 Straight Track	.98
3104	Trash Car w/1 Straight Track	.98
3105	Pulpwood Car w/1 Straight Track	.98
3106	Coal Car w/1 Straight Track	.98
3107	Mine Car w/1 Straight Track	.98
3051	Trainset Diesel w/4 Cars & Track	9.98
3052	Trainset Steam w/4 Cars & Track	10.98
3055	Trainset Diesel w/10 Cars & Track	14.98
3056	Trainset Steam w/8 Cars & Track	14.98
3071	HO Narrow Gauge Depot Kit	2.98

●HO CABLE CAR SYSTEM. October.

4021	HO Aerial Cable Car System	$19.95
4022	HO Material Cable Car System	14.95
4031	Bottom & Summit Buildings Construction Kit for Aerial Cable Car System	4.95
4032	Load & Unload Buildings Construction Kit for Material Cable Car System	3.95

●MINITANKS. October.

Z-195	US 6 Ton Fuel Tractor Trailer	$ .69
Z-198	US Anti-Tank 37mm and US ¼ Ton Cargo Trailer	.29
Z-200	British Medium Tank "Chieftain"	.39
Z-201	French Medium Tank AMX 30	.39
Z-203	US Armored Car M-8 with parts for command car	.29
Z-205	US Tank Destroyer M-10 with parts for M-36	.39
Z-207	US Medium Tank M-41 "Walker Bulldog"	.39
Z-208	US Self-Propelled Anti-Aircraft Gun M-42	.39
Z-209	US Armored Personnel Carrier M-113	.39
Z-210	US Mortar Carrier M-106	.39

●FREIGHT CARS. In Stock Now.

5292	G.A.T.X. Tank Car	$1.98
5294	Ethyl Tank Car	1.98
5317	New York Central Reefer (Blue, Yellow, White, Black)	1.98
5320	D & RGW Reefer (Black, Orange)	1.98
5351	Norfolk & Western Caboose	2.49

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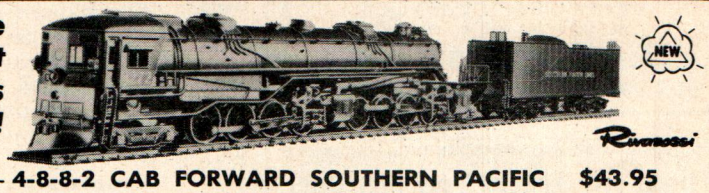
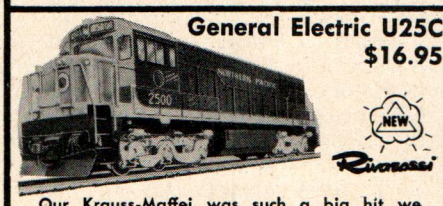
Here's The Biggest Loco News In Years!



#5111 — 4-8-8-2 CAB FORWARD SOUTHERN PACIFIC $43.95

If you've dreamed of owning a Cab Forward but couldn't afford one, now you can! (And be sure of top quality throughout, too!) This loco has more accurate detail, and runs better, than any Cab Forward ever made. The drive mechanism has been proved in our Y6B. It runs on 18" radius, with all drivers driven and all wheels flanged. Unfortunately, we've been unable to get production to meet demand on any of our locos this year, so we suggest you place a firm order now with your favorite Hobby Supplier for this magnificent loco. Available November-December.

General Electric U25C $16.95



Our Krauss-Maffei was such a big hit we figured you Diesel fans had something coming . . . and here it is. A real beauty. We can't begin to describe it here, but make sure to see it at your Dealer's, and place a deposit to make sure of getting one. Available in 3 roadnames, November-December.

5054 PRR **5055 Northern Pacific**
5056 Burlington

2-8-4 Berkshire $27.95

One of the most beautiful locos ever created has been authentically reproduced in highly-detailed plastic by Rivarossi, S.p.A. Early indications are that we won't be able to fill the demand for this one for at least a year, so be sure to place your order and deposit with your Hobby Supplier. Available in 2 roadnames November-December.

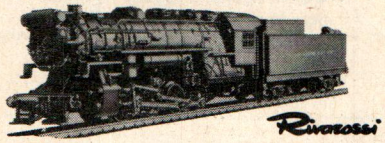
5061 Nickel Plate **5062 Pere Marquette**

STILL IN SHORT SUPPLY

Still in short supply . . . still apologizing! Pleased as we are at the overwhelming acceptance of our new items, we again apologize at not getting all of you the locos and cars you've wanted. We're doing all we can, but our factories in Europe won't compromise on quality. We hope you'll be patient, and place firm orders with deposits at your AHM Supplier to get early delivery of these tremendous HO values.

Y6b Mallet	$39.95
Krauss Maffei Diesel	12.95
Oldtime Genoa	14.95
Oldtime Passenger Cars	2.98
Standard Pullman	3.50
Standard Observation	3.98
Standard Baggage	3.50
Standard Diner	3.50

Don't Forget This One! 0-8-0 Loco w/Tender $18.95



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5082 Indiana Harbor Belt **5083 Santa Fe**
5084 Missouri Pacific **5085 Reading**

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There are only a few of these combinations available, so we suggest you place an order with your supplier today. Buy the Krauss-Maffei "A" Powered for $12.95, and get a $5.95 Dummy for only $3.00. Both for just $15.95!! This offer is limited to on-hand stock, and may be withdrawn at any time. See your supplier now!

Our Guarantee

We guarantee all AHM locos and cars to be free from factory defect for a period of one year from date of purchase. To assure guarantee coverage for your AHM purchase, register your items with the factory at the address shown below. If at any time in the following year you have problems due to factory defect, please write to us for instructions. Either our Repair Center or our 200 Repair Stations will repair or replace the item free of charge. (Exception: Light bulbs are NOT guaranteed.) This liberal policy reflects our interest and concern for you as a customer and railroader. So if you've never purchased AHM items simply because they weren't "Built In USA", look them over. Compare detail, quality, and guarantee. You'll find them the best HO merchandise ever produced anywhere.

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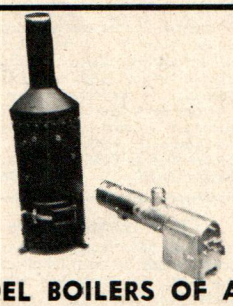
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Milwaukee, Wisconsin 53202. Included are the FS200 Semaphore at $6.50, FG300 Crossing Gates at $6.50, and FW600 Wigwag and ringing bell at $7.80. Each kit is complete with actuating mechanism that produces slow motion action based on expansion of metal heat. A stamped addressed envelope brings full information from Walthers.

Dispatcher's Tower

Erie-Lackawanna is painting its Alco road switchers in E-L gray and maroon with bright yellow ends. Among locos already painted are engines 902, 903, 904, 905, 907, 913, and GP-7 1243.

Jersey Central embankment at Aldene, N. J. completed and now needs only rail connections to permit CNJ passenger trains to connect into the Lehigh Valley and Pennsylvania, permitting the CNJ to junk its New York ferry operations.

MODEL RAILROAD TIMETABLE

NMRA REGIONAL MEETS

NEENAH, WISCONSIN. Sept. 26. Winnebagoland Div., Midwest Region, NMRA Fall Meet. Host: Neenah-Menasha Model RR Club, 323 W. Forest Ave., Neenah. Slide-tape clinic, slide shows, tour Soo Line terminal facilities, home layouts, club layout op., live steam on display. Info. John Franzen, RR #1, Menasha, Wis.

INDIANAPOLIS, IND. Nov. 7. Central Indiana Div., Mid-West Region Fall Meet. Contests: Model, First Time entry model, Kit, Creep and Pull; clinics, awards, dining car, movies, slides, door prizes. Hours: 12:00-7:00 PM. More info. contact J. R. Hagan, 361 N. 9th St., Middletown, Ind. 47356.

MIAMI, FLORIDA. Oct. 29, 30, 31. Sunshine Region Convention, Deauville Hotel, Collins Ave., Miami Beach. Auction, workshop, pike visits, railette activities, banquet, business meeting. Contact Ted M. Norcross, Jr., 1325 N. W. 127th St., North Miami, Fla. 33167.

CHICAGO HEIGHT, ILL., Oct. 10, Sunday. Midwest Region Fall Convention, American Legion Post 131, Joe Orr Rd. and Halsted St. Tour of Chicago Heights Term. Trabsfer RR, Illinois Central facilities, model contest for kits, clinics, railette program, home layouts, banquet. Registration $5.50. Infor from Charles Long, 8033 State Line Avenue. Minster, Indiana 46321.

MELBOURNE, AUSTRALIA, April 9 to 11, Easter 1966. Southern Cross Region Convention, Federal Hotel, 547 Collins St. Model Comps., Clinics, Layout Visits, Steam Museum, Narrow Gauge Steam Trip, Convention Dinner. Further info. contact Chas. Huggard, 65 Farview St., Glenroy, W. 9, Victoria, Aust.

CHICAGO HEIGHTS, ILL. Oct. 10. Midwest Region Fall Convention, American Legion Post #131, Joe Orr Rd. & Halsted. All day affair. Tours of Chicago Heights Terminal Transfer RR, car mfg. plant, Illinois Central Facilities; Model Contest for kits; Clinics; Railette Program; Home Layout Visits; Banquet. Reg. $5.50. Info. from Charles E. Long, 8033 State Line Ave., Munster, Ind. 46321.

AUBURN, N.Y. Oct. 15, 16, 17. Niagara Frontier Region Fall Convention, Cayuga Valley Model RR Club, Cayuga Museum of History and Art. Model contest, clinics, movies and slides, bull sessions, banquet & club layout in op. Contact: J. A. Houde, 40 Linn Ave., Auburn, N.Y.

DENVER, COLO. Oct. 3. Rocky Mountain Region Fall Convention. Farr info. contact: Ralph W. Hawes, 8223 Adams Way, Denver, Colo. 80221. 429-8668.

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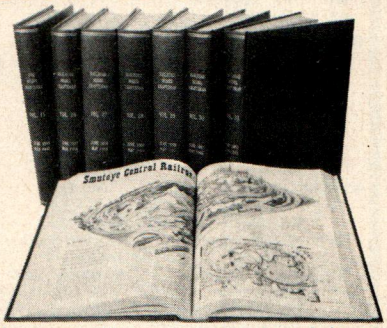
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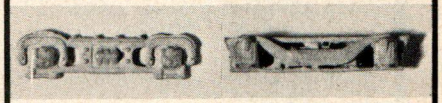
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9487	Switch Control Tower w/stairway	$2.25
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9500	Suburban Station	$3.95
9504	Mountain Station w/apt.	$3.95
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2n Jaguar XKE	50c	52a GMC Tract.	75c
3 Volkswagen	50c	53b Mixer Truck	$1.00
3g Karmann Ghia	50c	53k Shell Truck	75c
7n Open Sta. Wagon	50c	56 Coke Truck	$1.00
14x Mercedes Taxi	50c	57p Horses & Wagon	75c
21 Continental	50c	61 Pumper	65c
23c Mercedes 300 SL	50c	62 Ladder Truck	75c
27v Catering Truck	$1.00	63 Tow Truck	65c
29 VW Pickup	50c	65p Bulldozer	$1.35
31s VW Bus	50c	66k Crane	$1.95
35k Service Truck	65c	67 Dump Truck	$1.25
38 Tractor	50c	71 School Bus	$1.35
43 Coal Truck	75c	79 Esso Truck	$1.95
43f Pickup Truck	75c	116 Bagg. Truck	50c
44 Chevrolet 2½T	65c	117 Fork Lift	50c

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CLUB SHOWS

LONG ISLAND CITY, N. Y. Nov. 5. Empire Model RR Assoc. Annual Auction at clubroom in basement 34-05 44th St., at 7 pm. All welcome to come & buy, trade or auction HO model RR equip. Admission free, refreshments. Info. contact Wayne Foote, 37-68 64th St., Woodside, N. Y. 11377 Phone: 212-335-9496; or Hal Fletcher, 42-64 65th Pl., Woodside, N. Y. 11377 Phone: 212-IL 7-6236.

OAKLAND, CALIF. Oct. 15, 16, 17. East Bay Model Engineers Soc. Fall Open House, 4075 Halleck St., foot of Park Ave. Emeryville. Entrance thru Red Caboose jutting into Halleck St. Full op. HO 2-rail, narrow ga. & Trolley; O 2-rail, narrow ga. & Trolley. Adults 50c, children 25c. Hours: Fri. 7:30-10 PM; Sat. 2:00-10:00 PM; Sun. 2-8 PM. Contact: David Merrill, 2129 Pacific Ave., Alameda, Calif.

WESTFIELD, N. J. Nov. 19, 20, 21, 26, 27, 28, Dec. 3, 4, 5. Central Jersey Model RR Assn., Annual Exhibit, 135 Elm St. "O" ga. RR, Trolley & Interurban. Hours: Fri. 7-8 PM; Sat. 2-5 PM, 7-9 PM; Sun. 2-5 PM.

WILLISTON PARK, L. I., N. Y. Dec. 3, 4, 5. The Nassau Model RR Club, Inc. Christmas Show, 174 Hillside Ave. Admission by donation. Hours: Fri. 7:30-10:00 PM; Sat. 2:00-4:30, 7:30-10:00 PM; Sun. 2:00-5:00 PM. Contact: George Hatzfeld, Jr., 143 Laurel Dr., New Hyde Park, N. Y. 11042.

NEW HAVEN, CONN. Oct. 16, 17. Trolley Men The New Haven SME hosts. Bring slides, movies and operating models. Sat. 2:30 Warehouse Point Museum, evening at society's rooms 90 Court St.; Sun. 11:00 a.m. at Branford Museum,, 2:00-5:00 p.m. at society's rooms. R. H. Fairchild, 90 Court St., New Haven or 448 Griswold St., Glastonbury, Conn. 06033, for information.

CHICAGO, ILL. Nov. 3, 6. Smokey Mountain Model RR Club 20th Anniversary Open House, 1507 N. Keystone Ave. Rear entrance. O scale model railroad featuring steam, diesel, trolley operation. Hours: Nov. 3 - 7:30 PM; Nov. 6 - 2 to 4 PM, 7:30 to 11 PM. Contact J. W. Andresen, Secy. above address.

BROOKLYN, N. Y. Oct. 22-24, 29-31, Nov. 5, 6, 7. Bay Ridge Model RR Club Annual Show. "O" ga. RR & overhead Trolley op. at 28 Marine Ave. & 93rd St. Hours: Fri. 7:30-10 PM; Sat. & Sun. 2:00-6:00 PM. Admission 40c, children 25c. Contact Tom Brecht, 647 90th St., Brooklyn, N. Y. 11209.

HICKSVILLE, N. Y. Nov. 26-28, Dec. 3-5. West Island Model RR Annual Open House. Rear entrance 372 Old Country Rd. Featuring op. bridges & coal mine. Hours: Fri. 8:30-10:30 PM; Sat. 2:00-5:00 PM, 8:30-10:30 PM; Sun. 2:00-5:00 PM. No admission, donations accepted. Further info. contact Bud Borthwick at above address.

MERCHANTVILLE, N. J. Nov. 12, 13, 19, 20. Cherry Valley Model RR Club 4th Annual Show & Open House, basement Grace Episcopal Church, Maple Ave. & Centre St. Pub. Serv. bus Rt. #7 from Phila. to door. Hours: Nov. 12, 13, 20—1-9 PM; Nov. 19—6-9 PM. Show includes steam, diesel latest in colorful streamline lightweights. On3 is abuilding. Contact: John Heath, 25 Paul Rd., Maple Shade, N. J.

LONG ISLAND CITY, N. Y. Dec. 3, 4, 5. Empire Model RR Assn. Open House for model railroaders only, at 34-05 44th St., Long Island City. Club is celebrating its 20th year. Hours: Fri. 7-10 PM; Sat. 2-5 PM, 7-10 PM; Sun. 2-5 PM. No admission, donations accepted.

CAMDEN, N. J. Nov. 26, 27, Dec. 3, 4, 10, 11. Silver Valley RR Annual Show, Central Branch YMCA, 614 Federal St. Layout HO (over 1000') & HOn3 (over 100'). Hours: Fri. 7:30-10:00 PM; Sat. 12:00 noon to 5:00 PM. Info. contact Jerome Crosson at above address.

MURRAY HILL, N. J. Nov. 6. Summit-New Providence HO RR Club 4th Annual Model RR Auction at 8 PM. 94 Oakwood Dr. (¼ mi. east of Lutheran Church on South St.) Admission free. 10% of sale price to Building Fund. Model RR equip. or tools accepted Fri. or Sat. Contact Paul Mallery, 464-5315.

CLUB NOTICES

LONG ISLAND SOCIETY OF MODEL ENGINEERS "O" Gauge now organizing. For info. call James R. Hetfield — 516 PY1-8593 7 PM - 9 PM.

ALEXANDRIA, VA. Northern Virginia Model RR Club welcomes new members. Meetings every Tues. at 7:30 PM, in their bldg. in Southern Rwy. Duke St. Yard, at end of Holland Lane, 1 bl. off Duke St., 5 bl. from RR sta. in Alexandria. Contact: James E. Foley, 1608 Abingdon Dr., Alexandria.

LANCASTER, PA. Lancaster City and County RR Club meets every Wed. 7:30 PM, rear 709 E. Marion St., Lancaster. Interested HO gaugers invited. Contact: Richard Frailey, Jr., 1910 St. Regis Lane, Lancaster. Phone: 872-7006.

WASHINGTON-BALTIMORE AREA — "S" Gaugers, any and all in this area invited to attend R-V meets of this organization. Contact Ed. Schumacher, 7111 Decatur St., Hyattsville, Md. 20784. Phone 772-2145 (5-10 PM).

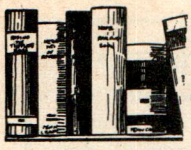
NEWARK, N. J. Newark Model RR Club in new headquarters, 3rd fl. 337 No. 5th St., Newark. Public Serv. Trolley line out of Penn Sta. Newark runs right back of club. New members welcome, any Fri. night between 7 and midnight.

GLENS FALLS, N. Y. AREA. HO RR Club forming needs members. Anyone interested contact Lawrence K. Ball, P. O. Box 25, Glens Falls, N. Y. Phone: RX 2-8764.

FAN TRIPS

BUTLER, N. J. Nov. 2, Dec. 24, 31. The Butler Day Express will make trip on New York, Susquehanna and Western RR, leaving N. Y. Port of Authority Bus Terminal (41st St. & 8th Ave.) 1:10 PM from platform 51; arrives Butler approx. 2:36 PM. Bus service available to Paterson, Newark & NYC from Butler. Tickets to Butler $1.50, may be purchased at windows 26, 27, 28 Port Author. Bus Term. Info. contact: J. R. Guthrie, 20 Trent Lane, Smithtown, N. Y. 11787.

Ed. Note: The Susky's Butler Day Express is a regularly scheduled train that runs several times a year on the eve of holidays, or on election day. Equipment is probably a 1000hp Alco road switcher and one ex-D&H coach with drumhead sign. Since the Butler service is operating only by virtue of a court injunction, this could be a last chance for metropolitan area efficionados to enjoy the ride. So, go join the faithful.



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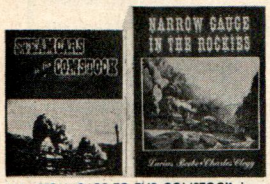

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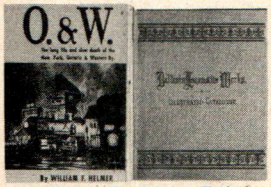

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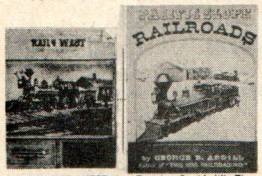

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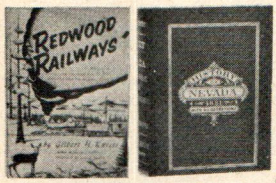

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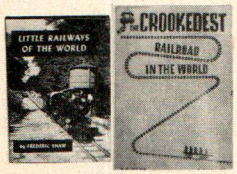

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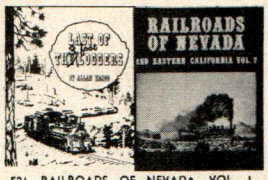

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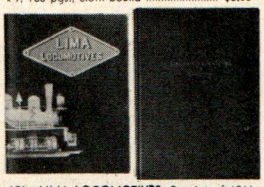

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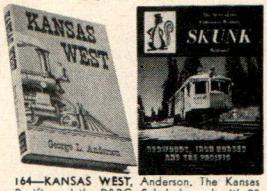

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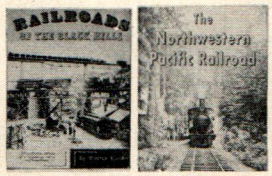

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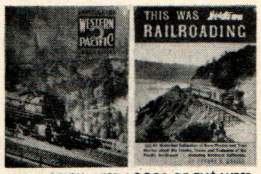

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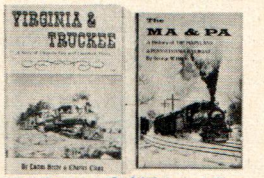

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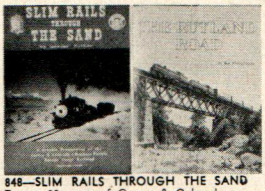

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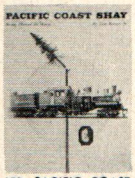

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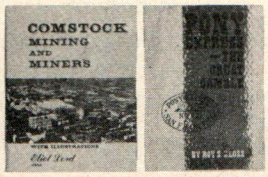

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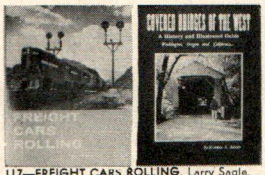

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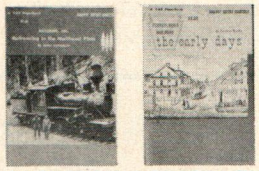

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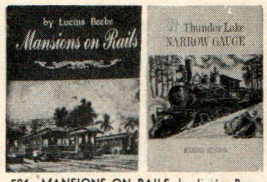

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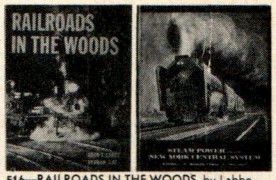

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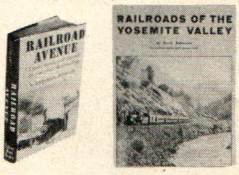

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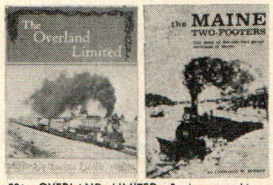

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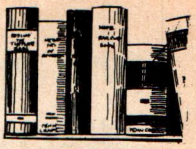

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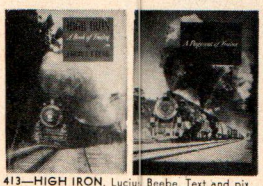

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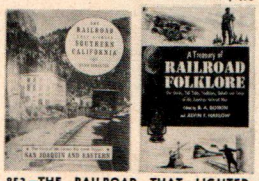

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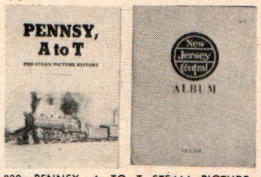

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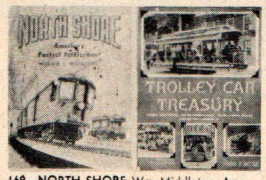

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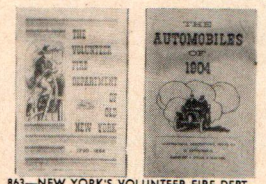

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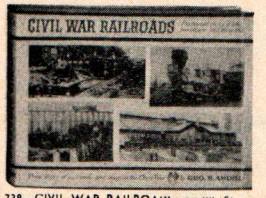

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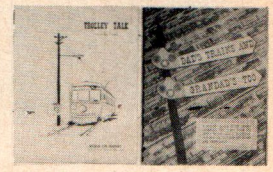

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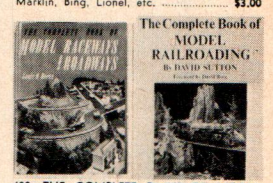

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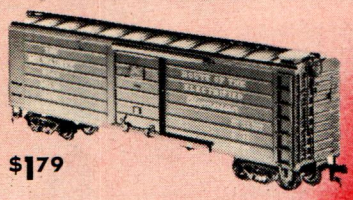

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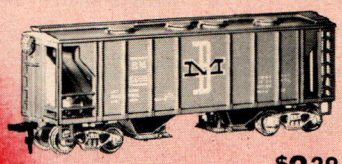

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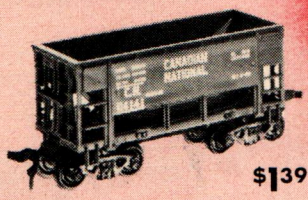

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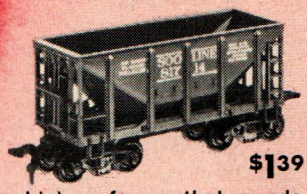

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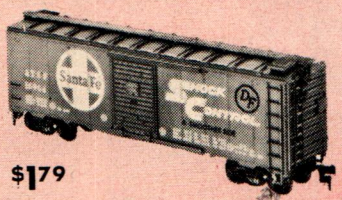

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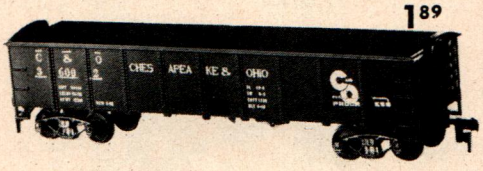

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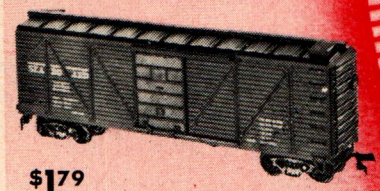

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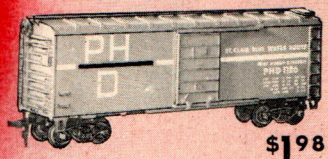

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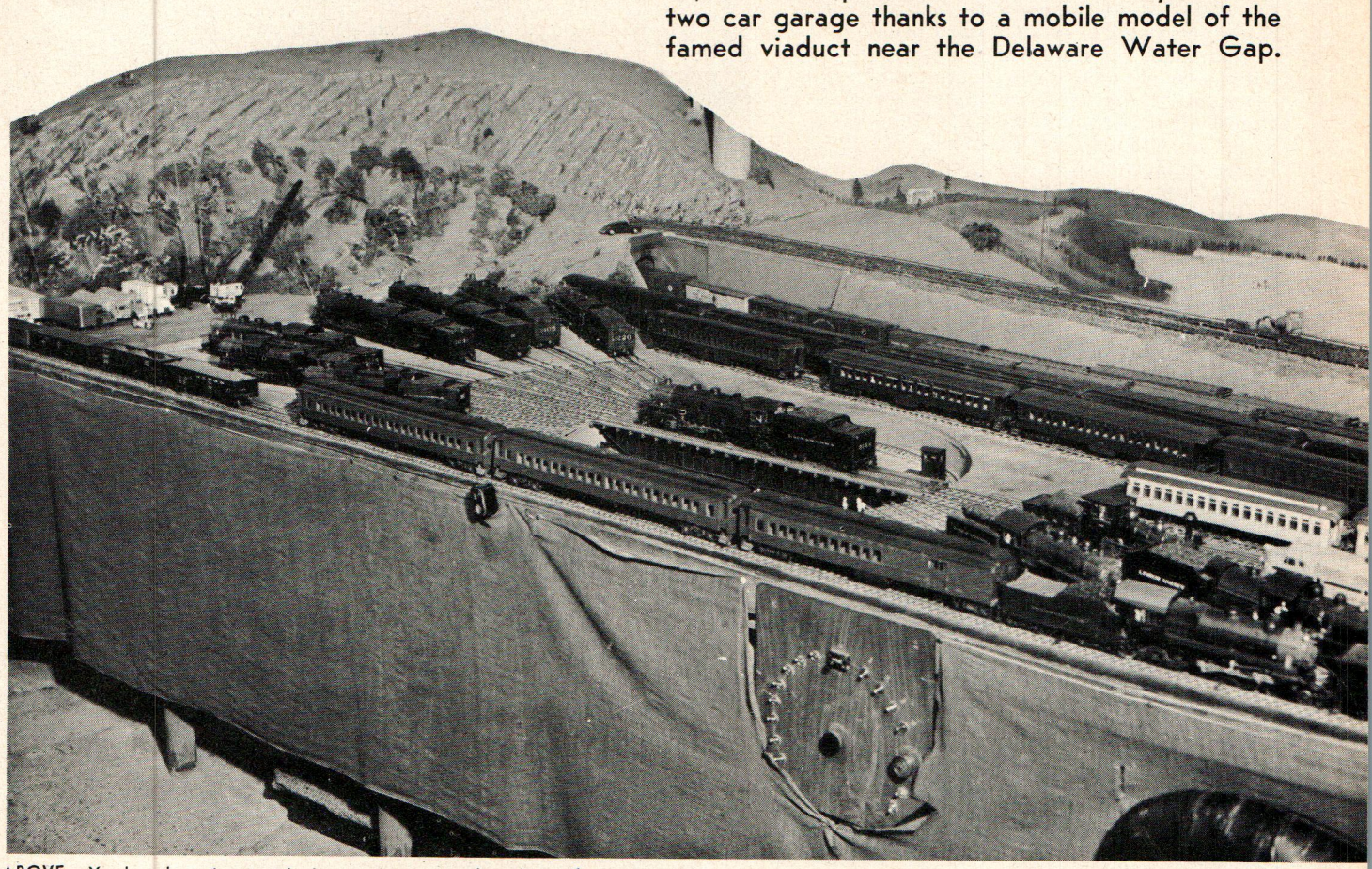
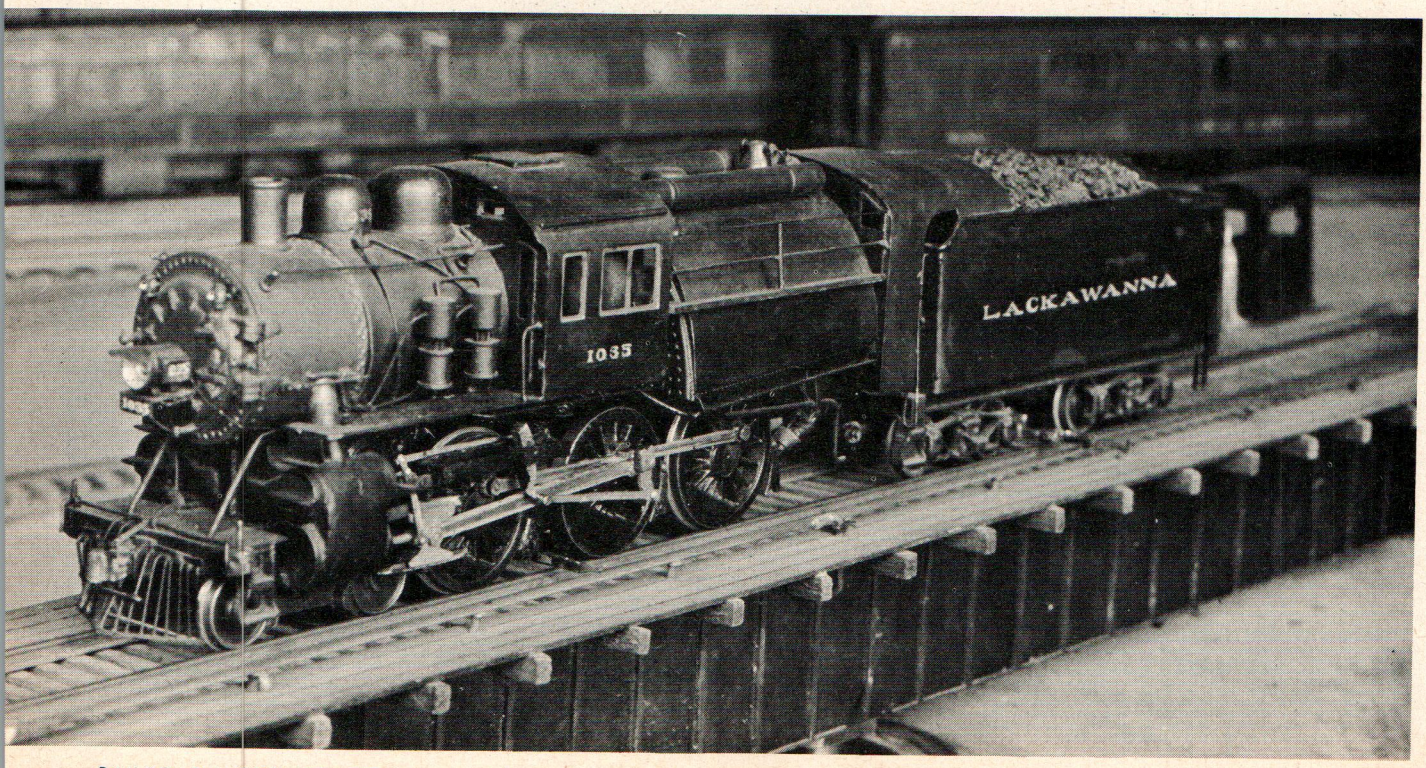
LACKAWANNA RR IN 0 GAUGE by Ken von Steuben

The Lackawanna Railroad is an outside third rail 17/64" scale pike that fits comfortably inside a two car garage thanks to a mobile model of the famed viaduct near the Delaware Water Gap.



ABOVE—Yard and engine terminal area covers good portion of unused garage bay. Pre-merger Lackawanna equipment predominates but locos of other roads are represented: Lehigh, Hudson River, Pennsylvania, Chesapeake & Ohio, and Lehigh Valley. No Erie!

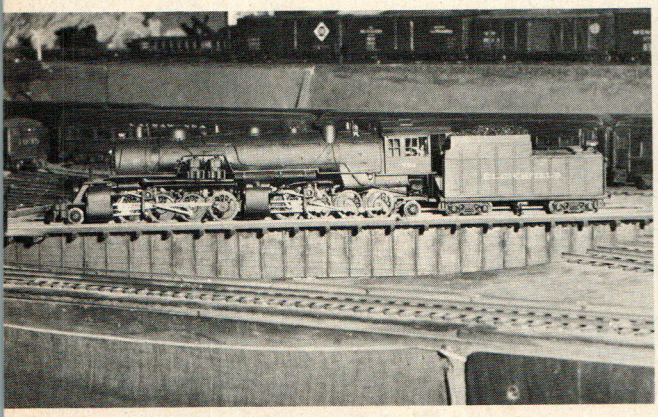
BELOW: Homebuilt Lackawanna camelback Ten-Wheeler No. 1035 is one of many scratch-built locos on the pike. Note collector shoes.



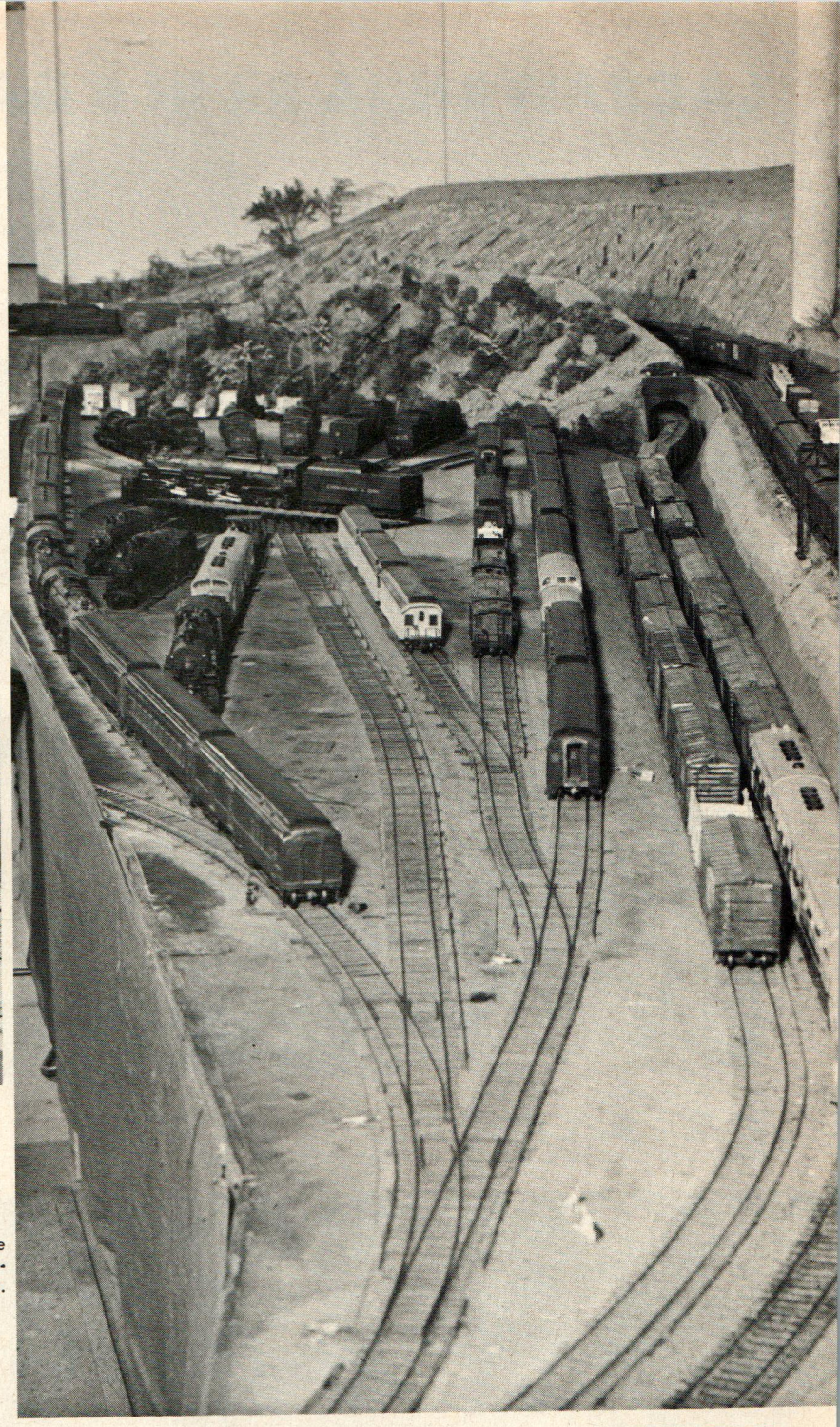
FEW 17/64" scale O gauge pikes still operate today but here and there one is still to be found although scattered pieces of the larger O gauge cars and locomotives still dot the rosters of older layouts. Commercially, 17/64" scale kicked the bucket many years ago. O gaugers have been a reasonably content lot for years with quarter inch scale equipment.

Those few die hards remaining are almost all scratchbuilders, as is Kenneth von Steuben, of Nazareth, Pa. Ken's vintage pike is now located in a two car garage and features a specially movable section of track that permits parking the car in the garage.

Ken also still uses outside third rail for pickup. Operation is good and the expense of converting over twenty husky engines and an even larger number of freight and passenger cars isn't worth the slight improvement in appearance. Besides, some MU cars or a juice jack might be added to the roster someday.

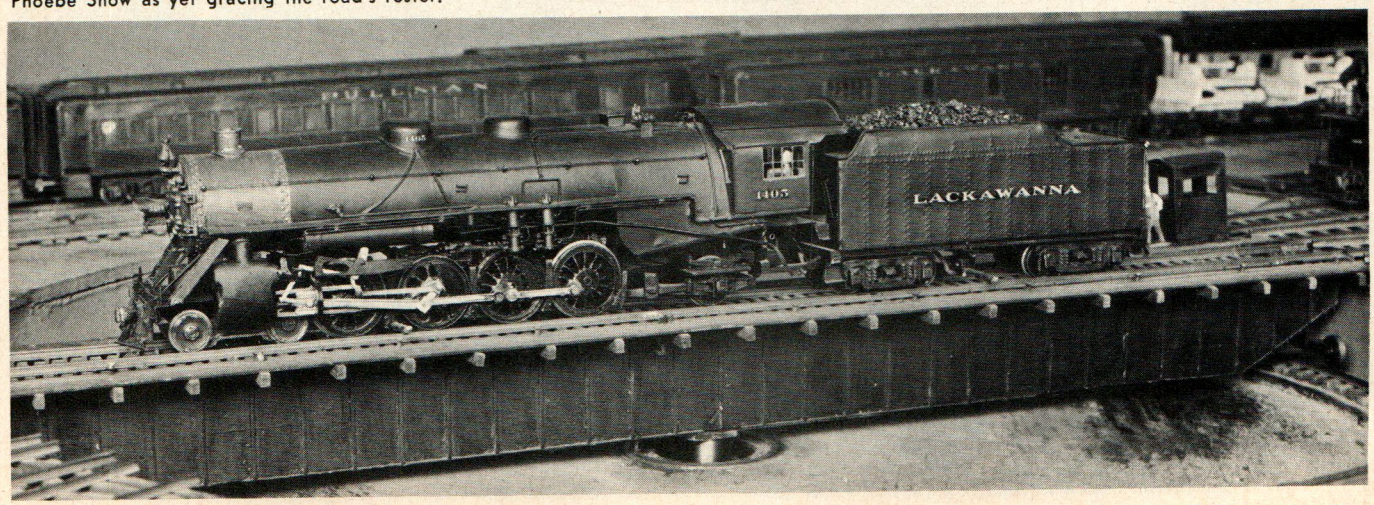


Chunky Clinchfield 2-8-8-2 with diminutive tender is only articulated on the O gauge rr.



RIGHT—Yards and engine terminal area are relatively simple although they appear complex. Outside third rail is used for all pickup.

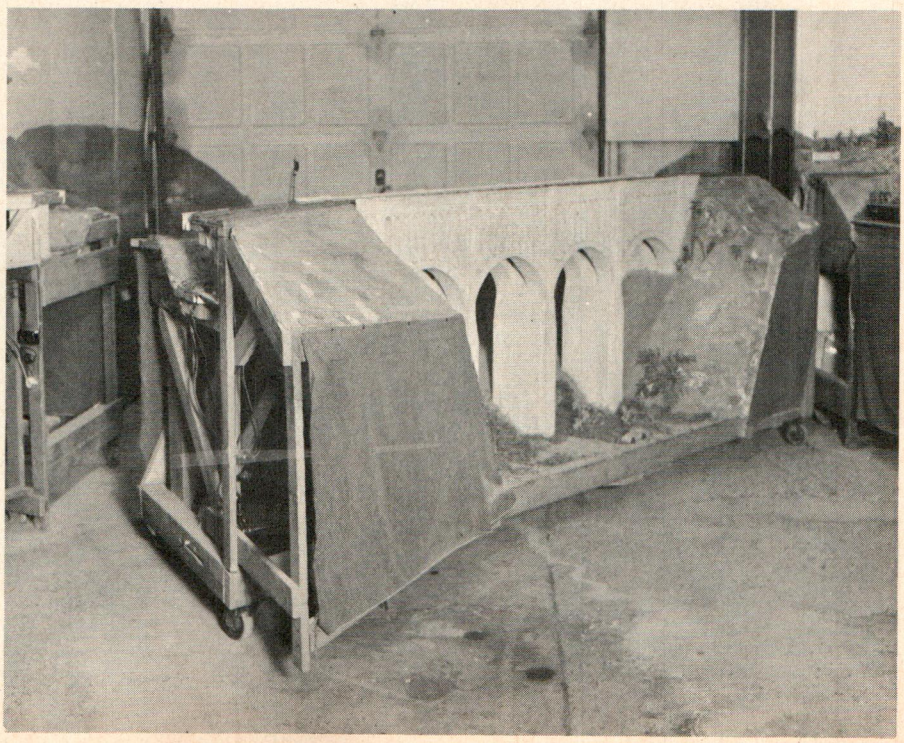
Big Mountain type No. 1405 is used on heavy passenger runs. Diesels on roster are used in freight service only with no streamlined Phoebe Snow as yet gracing the road's roster.



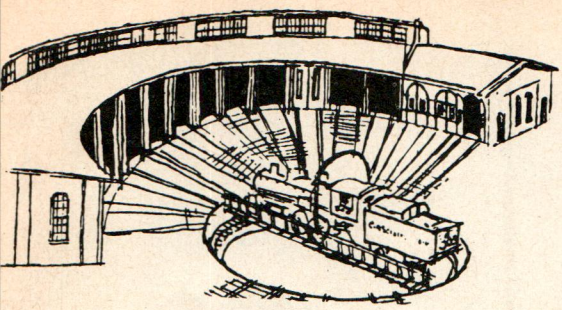
Casters permit this entire section of right of way to be rolled out of the way for garaging of the family buggy. Viaduct is shortened but recognizable version of famous DL&W structure.

If the 17/64" boys don't dig the quarter inch equipment, they have no scruples about using wheel sets and other parts for scratch building. If an 80 ft. car in 17/64" scale measures 1½" longer than its ¼" scale counterpart, the difference is insignificant in castings measuring only a few scale feet in length.

The O gauge Lackawanna Railroad represents the road pretty much as it was back in the late 1930's. Equipment is all standard heavyweight and the Lackawanna Limited has yet to be dieselized with lightweight equipment and a name change to Phoebe Snow. The few diesels on the roster are strictly for freight service and the management is still not 100% convinced that they will replace steam power. We don't think they ever will on this road.

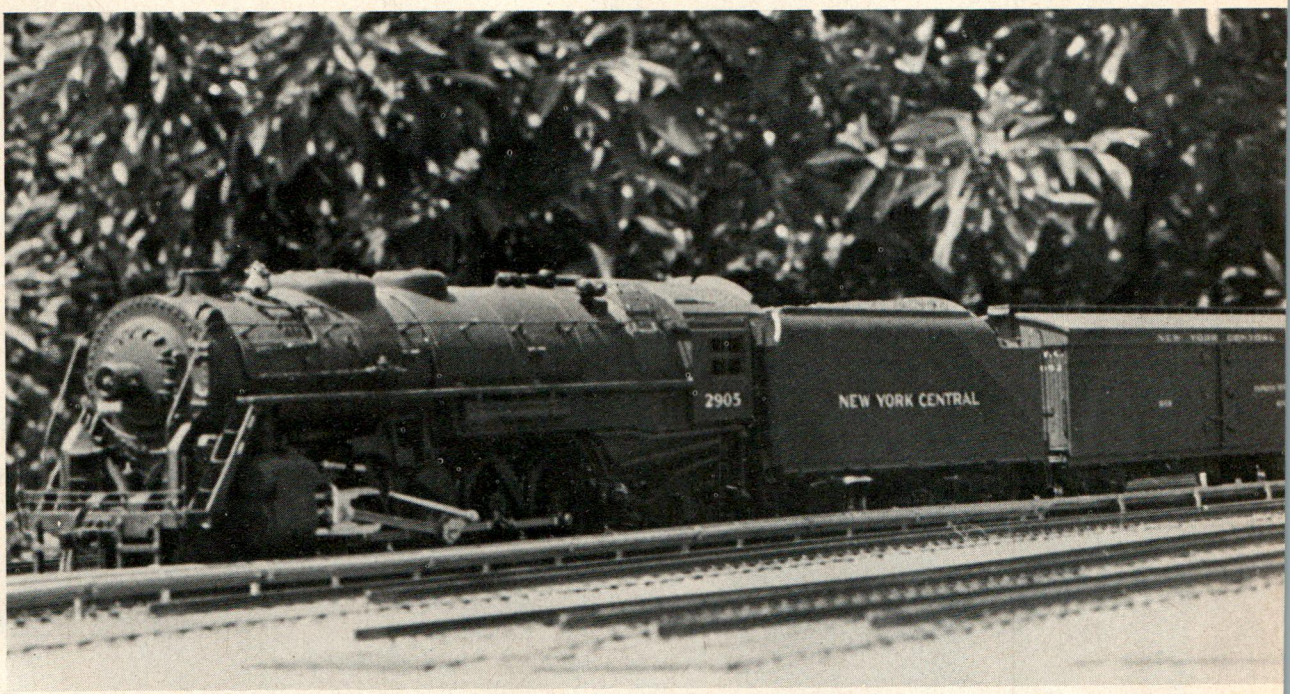


RIGHT—Here's how the sliding unit works. No trouble is experienced in maintaining alignment on this code .172 pike. For HO, other small gauges, some sort on pin or bolt would help keep tracks lined up. Unit plugs in.



Models of the Central

as built by Richard N. Karnes

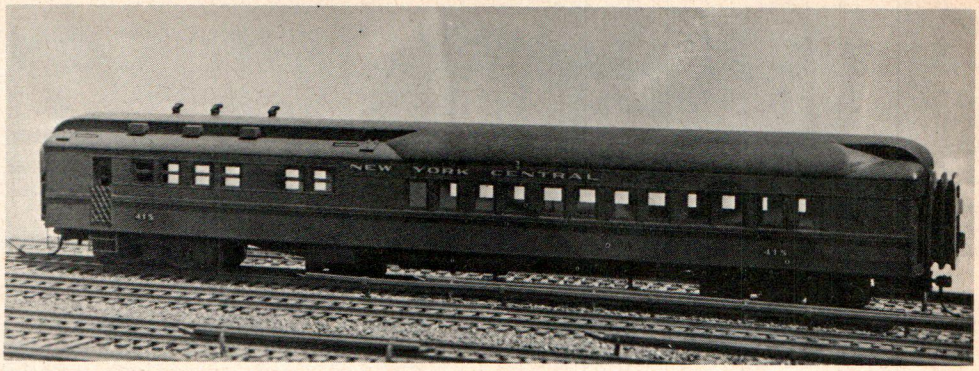


Photos by F. Raoul Martin

Left side of No. 2905 on the head end of a milk train. Second car is scratchbuilt work of Randolph R. Brown. Outside rail is NYC type.

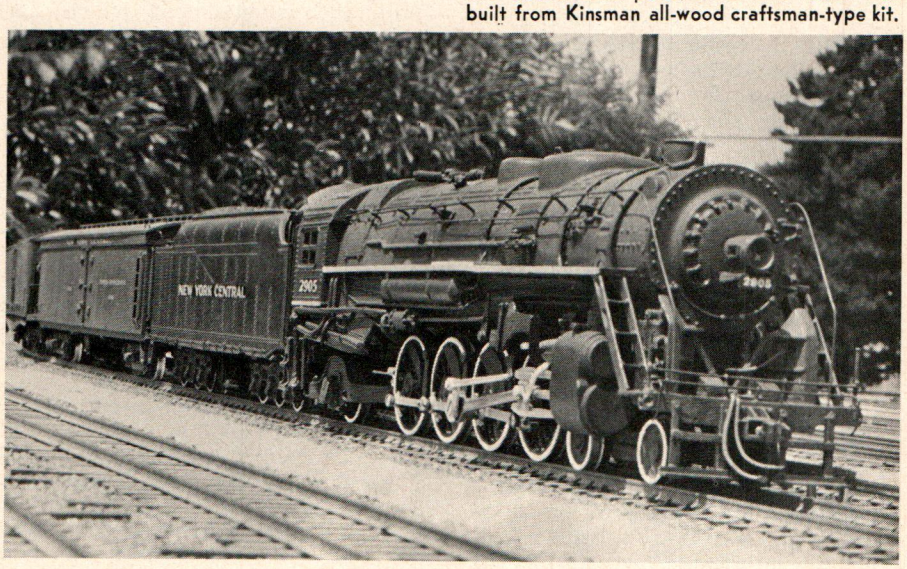
Rex Mogul at left with scratch built caboose of wood and styrene. 14-section Pullman, second car from right is made from two AF cars spliced together. All models shown on these pages are S ga.

Equipment shortages for his pet road in Dick Karnes' favorite gauge didn't stop him from building the models he wanted!

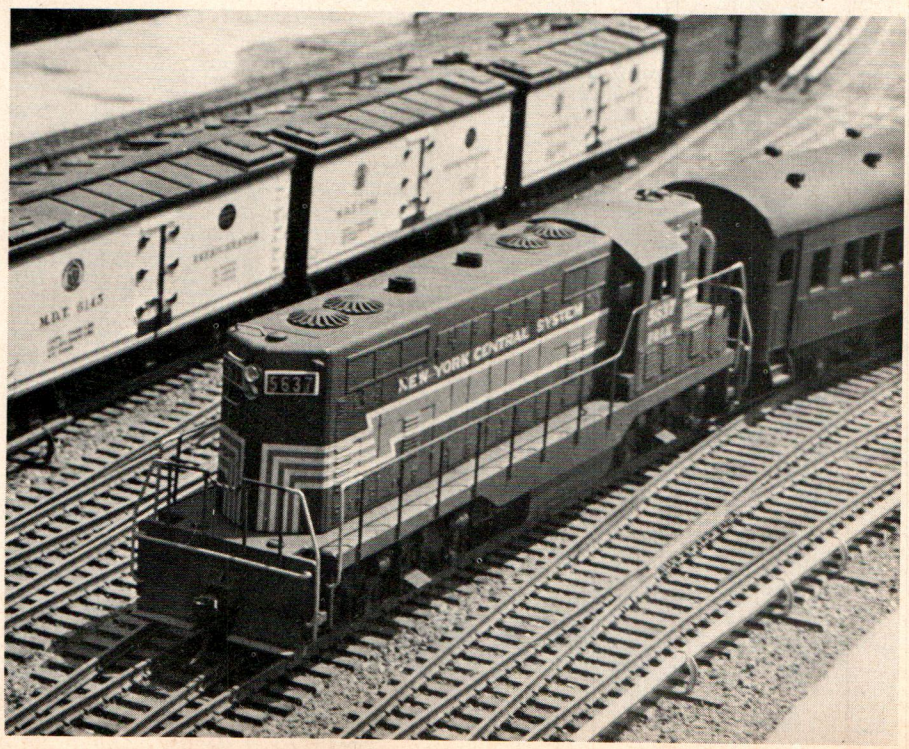


Scale length diner was built from Models by Miller kit with extra parts by Walthers, Super Scale. Car is painted New York Central green.

Beautiful New York Central L-2b Mohawk with hand-me-down Hudson tender is built from American Flyer, Kemtron, Nord, Rex, NASG, and scratchbuild parts. NYC milk reefer was built from Kinsman all-wood craftsman-type kit.



Pittsburgh & Lake Erie GP-7 No. 5637 uses an American Flyer superstructure, Enhorning F-7 drive, plus steel and brass frame and rebuilt ends. Coach is Osgood-Bradley type built from Central Lines sides. Reefers in rear are modified Kinsman kits while third rail supports were cast in brass from Karnes pattern to New York Central prototype, in which the third rail is covered by wood.



IF THE average HOer has it lucky insofar as obtaining kits and equipment is concerned, the same is not true for S gaugers and even those HOers who are looking for very special prototypes and equipment of pet railroads.

S gauger Richard N. Karnes is a New York Central fan and an S gauger with a strong hankering for scale. American Flyer equipment provides a good starting point for a number of New York Central locos and cars. Largest loco on the roster is a giant L-2b Mohawk which utilizes a Flyer Hudson body plus parts by Kemtron, NASG, Nord, and Rex, in addition to scratch built parts. The net result is a gorgeous Mohawk with excellent pulling power.

Another rebuilt Flyer engine is the P&LE GP-7, now equipped with an Enhorning F-7 drive, new steel and brass frame, and rebuilt ends. Most of the freight cars are kit built from various makers but the familiar wood caboose is another scratch job using wood and styrene.

Standard passenger cars had been a problem until the new Models by Miller were introduced, although American Flyer shorty Pullmans splice together nicely to create 85 ft. 14-section Pullmans.

There's no stopping a real modeler when he really wants something bad enough.

FOUR CAR RECTIFIED CONTROL SYSTEM

by Richard Dorn

TRACTION modeling is very active in Detroit, and is unique in several ways. There are two strong traction clubs—the Michigan Electric Railway Club (O Gauge), and the Detroit United Railway Club (HO Gauge). One unique factor is that the two clubs operate on an associated basis. Any regular member of one club is automatically an associate member of the other. Meetings of each club are held periodically, and it is seldom that MER men are not present at the DUR meeting, and vice versa. In other words, there is no "battle of the gauges" in Detroit.

The O gauge group has a club layout in the basement of one of its members, and two of the members have home layouts. Prototype for the system is the old Michigan Electric Railway, which operated from Detroit to Fort Wayne. Rolling stock is almost all modeled after prototype Michigan Electric cars.

Several members of the HO Club have layouts at their homes and take turns hosting club meetings. Most of them have chosen one of the divisions of the old Detroit United Railway for prototype: there is the Birmingham Division; the Detroit Street Railway Division; the Flint Division; the Pontiac Division; the Detroit, Toledo and Lake Shore Division; the Orchard Lake Division and the Plymouth Division. In prototype each of these was originally an independent line, finally being all brought together as the Detroit United Railway. This means that equipment on the original lines varied widely and each model layout adheres pretty closely to the equipment originally used on that line.

Another point that is unique is the control system used by both clubs. It is the so-called Four-Car Rectified Control System, which allows completely independent control of each of four cars concurrently, no matter where they are on the line or what direction they are going, without resort to any blocks or sections. Where the system first was evolved is not known, but Leigh Wright and the late Ken Lindquist of MER are largely responsible for the refinement and development which has taken place in Detroit, and which has resulted in a very effective and realistic means of traction car control.

Figure I shows the basic wiring diagram for such a system. Power is fed to the layout at 24 to 30 volts AC. Overhead is common to all cars on the line. The key to the system is the rectification used on the other power leg, and in the individual cars. Two rheostats, in parallel, are placed between the transformer and each rail making a total of four rheostats or controllers. In series with each controller is a single wave rectifier, one positive and one negative for each rail feed. Controllers A and B go to the left rail, and C and D to the right rail.

It is necessary of course to keep the two rails insulated from each other, and to insulate all the wheels on one side of each car. Between the motor and the uninsulated wheels of each car another single-wave-rectifier is installed, in series with the motor. These rectifiers, both in the cars and at the controllers, must be able to handle at least a half amp current at fifteen volts. In Detroit we use in the cars either a single plate selenium, or one of the new tophat rectifiers which recently came on the market.

Now it will be seen that Car A can be controlled only by Controller A, which will have no effect whatever on the operation of cars B, C or D. Current flows from the left rail through rectifier and motor to the overhead. Rail polarity is usually used to designate type of car, so an A car is a Positive Left Rail car. Current is flowing from overhead to rail in car B, so it is known as a Negative Left Rail car, and so on. A small letter in the motorman's window is used to designate which type of car it is, A or B or C or D. What were Route signs in prototype can be used for this purpose.

Figure II shows the hookup in the car. For double-end operation the two pole hold-down hooks are connected together, then in series with the rectifier to the trucks. The two trolled pick-up poles are connected one to each brush of the motor.

If your car is built of wood, cardboard, or other non-conducting materials, you need take no insulating precautions. If your car is one of the newer all-brass imports, however, it will be necessary to insulate the hold-down hooks from the roof, as well as the trolley pole bases, and to insulate the motor from the floor. If you are making a single-ended car, this last is not necessary, since the only insulation needed is at the trolley pole base, with its lead to the motor brush which is insulated. In this case, however, the rectifier must be between the trolley pole and the motor brush. Otherwise it will be shorted out. The other brush, if it is insulated, must be connected to the floor, or to the trucks if they are insulated from the floor.

Figure II is an A car—Positive Left Rail. Current will flow from the left rail through the rectifier to the lowered pole and its hold-down hook, through the motor, thence through the raised pole to overhead. (Of course all the right-hand wheels on this car must be insulated.) Installing the rectifier with an opposite polarity would change this to a B car—Negative Left Rail.

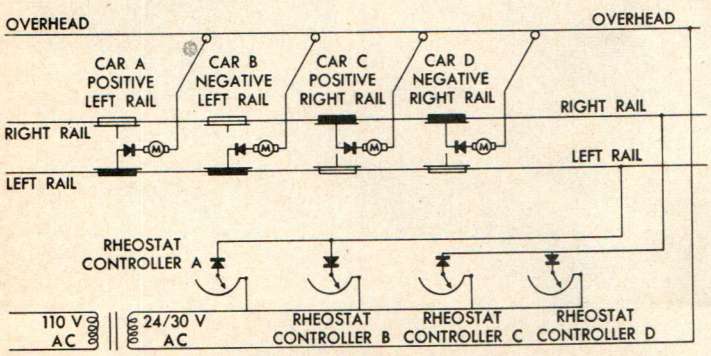


FIG. I - WIRING DIAGRAM - FOUR CAR RECTIFIED CONTROL

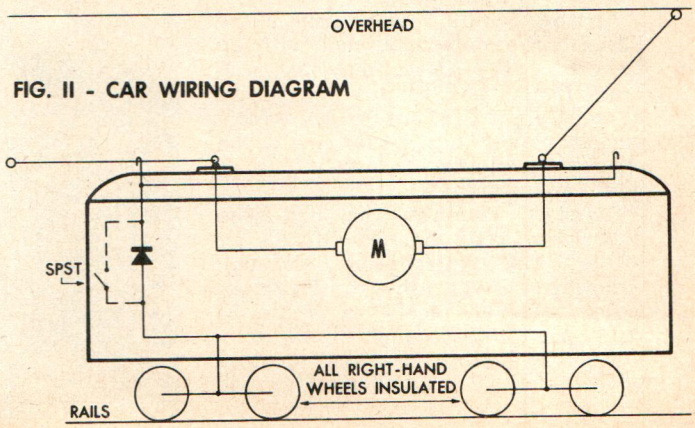


FIG. II - CAR WIRING DIAGRAM

Detroit's trolley modelers use a unique control system that permits completely independent control of four cars concurrently, no matter where they are on the line, or what direction they are heading, without resort to any blocks or sections, through use of a non-overheating pulse power system!

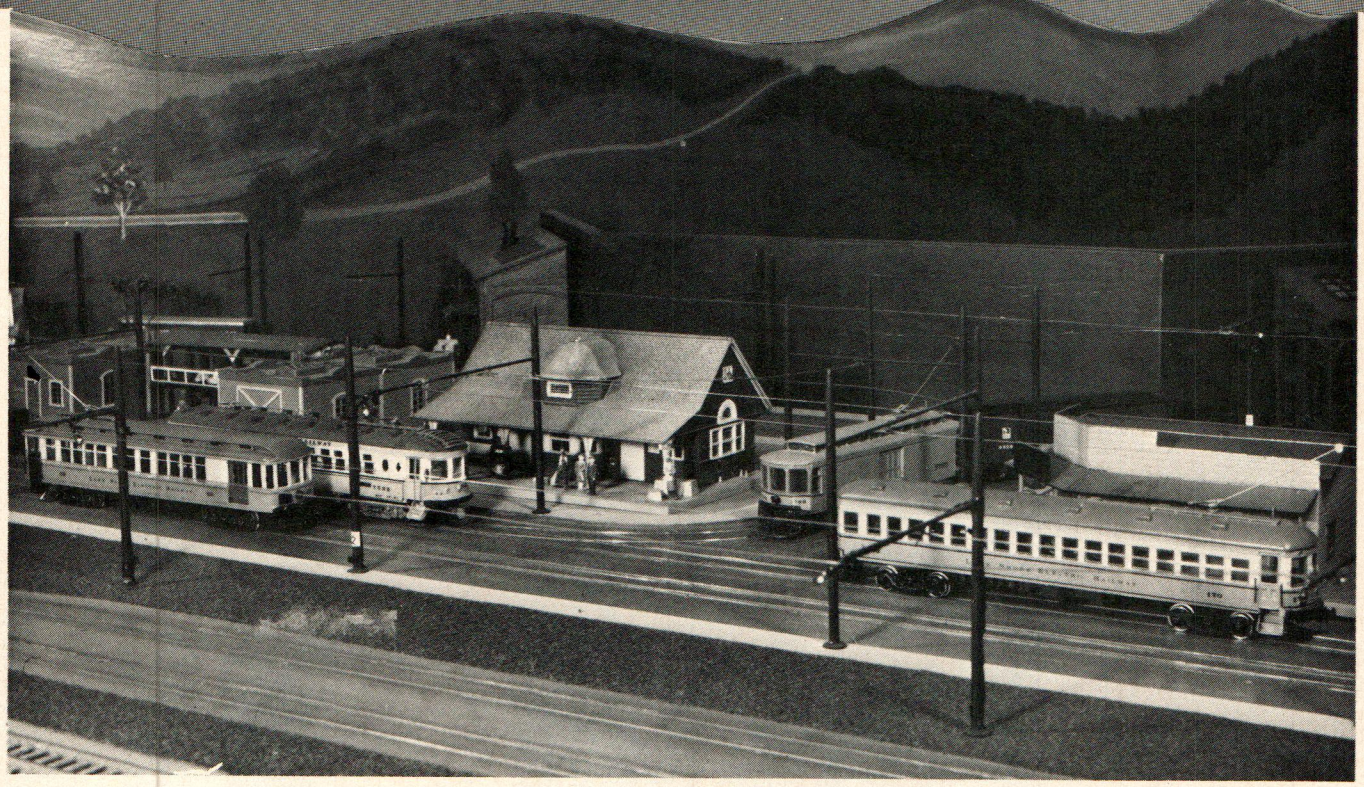


FIG. III—Four cars, all individually controlled without use of special blocks or cabs, rolling over tracks of the Detroit United Railway Club. Most of the equipment used follows Detroit proto-type but the Ohio influence appears to be well in evidence.

Each car is receiving half-wave DC, or pulse power. Some will wonder if this does not result in overheating for extended runs. The answer is NO. Overheating by pulse power is due to what is called a "back e.m.f.". This is a momentary back-surge of current which takes place between the cycles of the half-waves, and is induced by the motor windings and magnet. The motor in effect becomes a generator for the instant. But the presence of the rectifier in the car, right at the motor, prevents this back surge from flowing; so without the back e.m.f there is no overheating of the motor windings. Cars have been run literally for hours at a time at shows and exhibits, with only normal heating of the motor.

Incidentally, it is the fact that the cars are receiving only half-wave that determines the source voltage. Since only half of each wave is passed by the rectifiers, the effective average voltage at the motor from the 24 to 30 volt source is only 12 to 15 volts, less a small loss in the rectifier and any line loss which may take place.

Reference again to Figure II will show that the car can be reversed by changing poles. This changes the direction of the current through the motor, but not through the car. It is still from rail to overhead. But . . . now it is a C car . . . in other words, going the other direction it has become a Positive *Right* Rail car. But obviously, it still answers to the same controller. How come?

Particularly in the case of a freight motor or steeple cab, it may be desirable to have panel board reversing for switching operations. This can be accomplished by installing a bypass for the rectifier in the car with a simple SPST switch, as shown by the dotted line in Figure II. Then the car will respond to polarity reverse from the control panel. This means too, of course, that the panel must have an alternate arrangement to provide 12-volt full-wave DC to that section of track which will be used for the switching, such as in the yards, and that this section must be arranged to permit electrical isolation from the rest of the layout. Reversing can also be accomplished, when the rectifier is bypassed, by using the opposite polarity current. In the case of the A car, it will go forward when the A controller is used. When the B controller is used, polarity is reversed, and the car will reverse. Now, of course, we are using pure pulse power, without the non-heating effect of the rectifier. It is obvious that no other B car can be on the line when this is done.

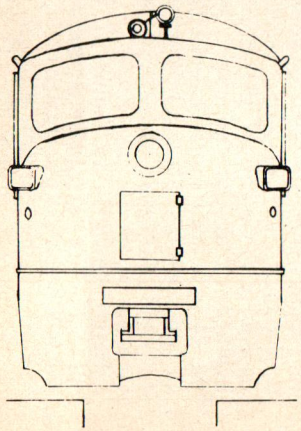
CAUTION: Never have an A and a B controller both on when a non-rectified car is on the rails. You will be sending 24 volt AC to that car.

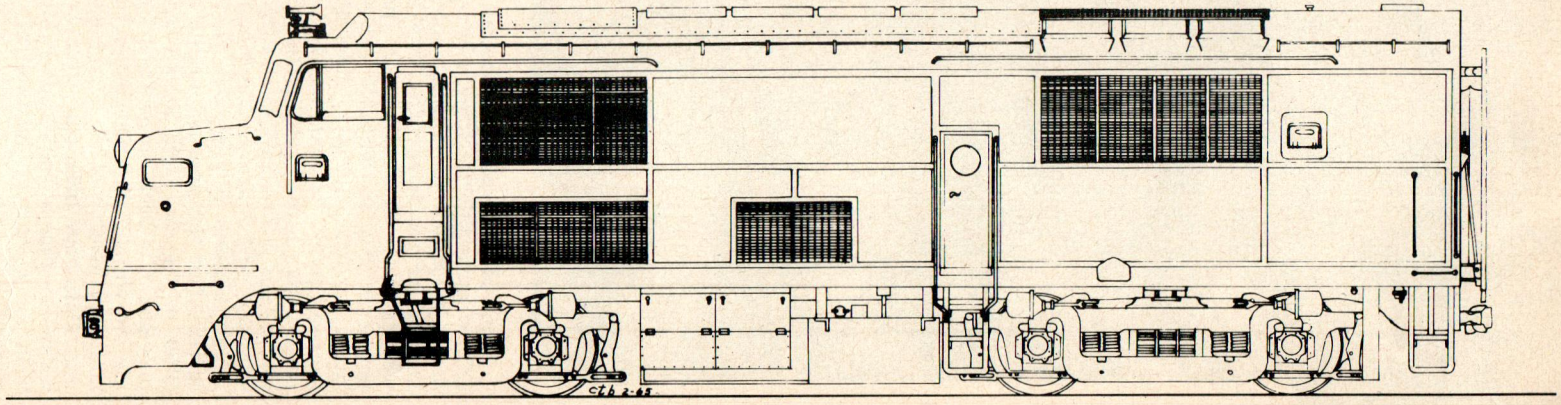
Figure III shows a busy moment at the Toledo station on Harry Darst's HO Lake Shore Electric lines. DUR No. 7534 is in front of the station, about to pull out. Lake Shore No. 170 is waiting its turn to get to the station. Meanwhile, the Lake Shore combine is about to start out on a local trip, southbound. While all this is going on, the old Lake Shore box motor, pulling a box trailer, stands by until it can take off on its daily milk haul to Detroit. All four of these cars are on separate controllers, and when the line clears, any one can be moved independently of the other three.

This brings up the question of proper polarity in the rails. If your track plan is a loop, then the left rail is always left, and the right rail is always right. But, if you have a loop-to-loop track plan, then some means must be found to get each rail connected to its proper controller.

Among the roads using Baldwin road freight diesels was the Jersey Central. CNJ kept their units running after Baldwin quit with parts salvaged from scrapped double end passenger units. These locos were liked by their crews.

Jersey Central freight with Baldwin units on the head end, a handsome strike streaking across the northwestern New Jersey farmland past Asbury depot. 4x5 Speed Graphic, 127mm Ektar lens, with focal plain shutter stopped the action on pan film for Hal Carstens.





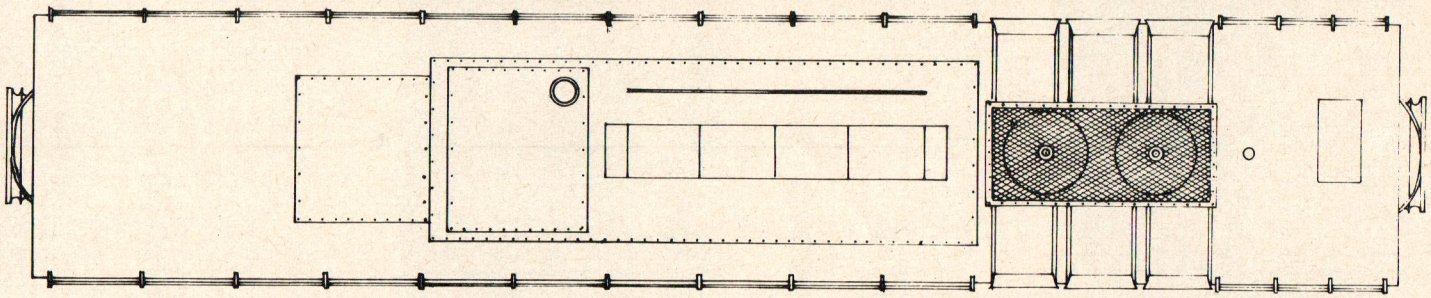
BALDWIN DR-4-4 1500: 1947

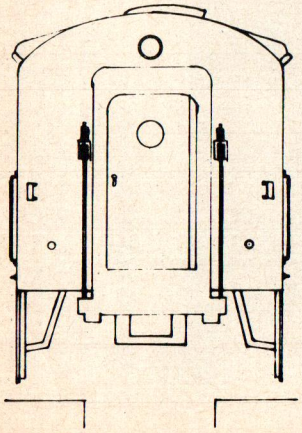
drawn by Craig Bossler

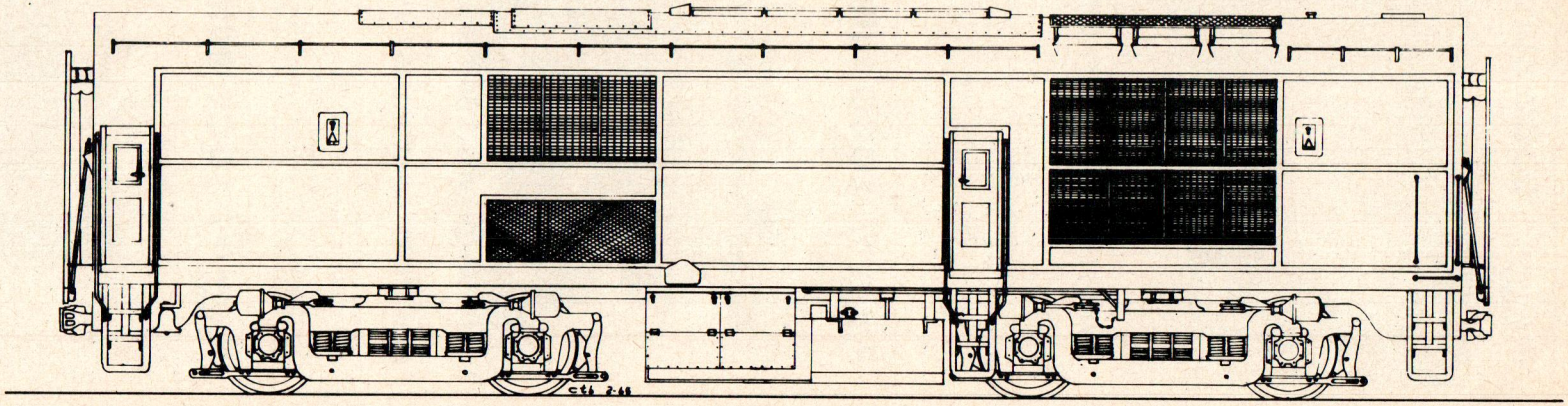
TECHNICAL DATA

Horsepower per unit	1500
CRRNJ Road Class	FD-43
CRRNJ Numbers, and dates built	70, 71, 11K . . . Sept. 1947
	72, 73, 12L . . . June 1948
	74, 75, 13M . . . July 1948
	76, 77, 14R . . . Aug. 1948
	78, 79, 15S . . . Sept. 1948
Diameter of Drivers	42 inches
Total weight per unit, Cab	271,500 lbs.
Booster	267,730 lbs.
Tractive Effort, Cab	67,875 lbs.
Booster	66,932 lbs.

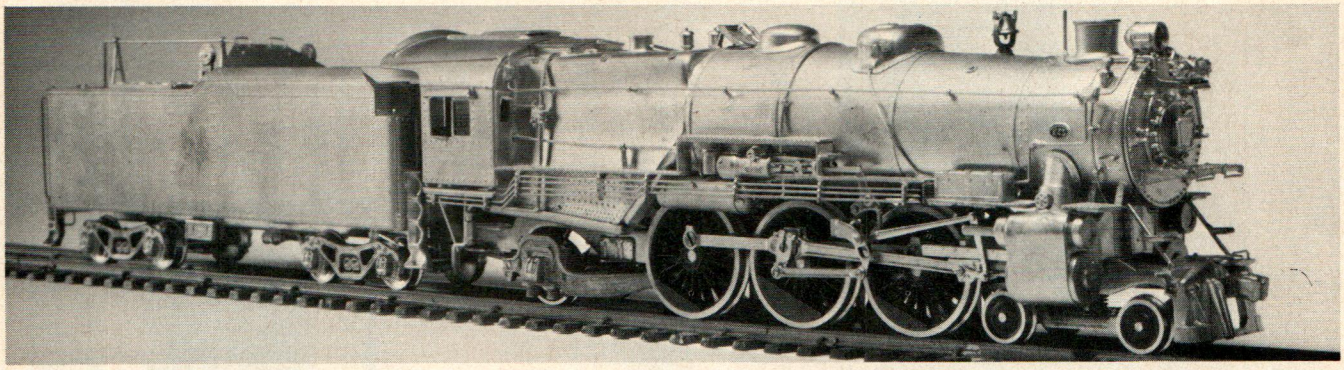
NOTE: Drawing is based on notes of the proto type dated Nov. 15, 1964, seen at Bethlehem, Pa. Drawings show units 78 and Booster 11K. Minor variations distinguish other units.







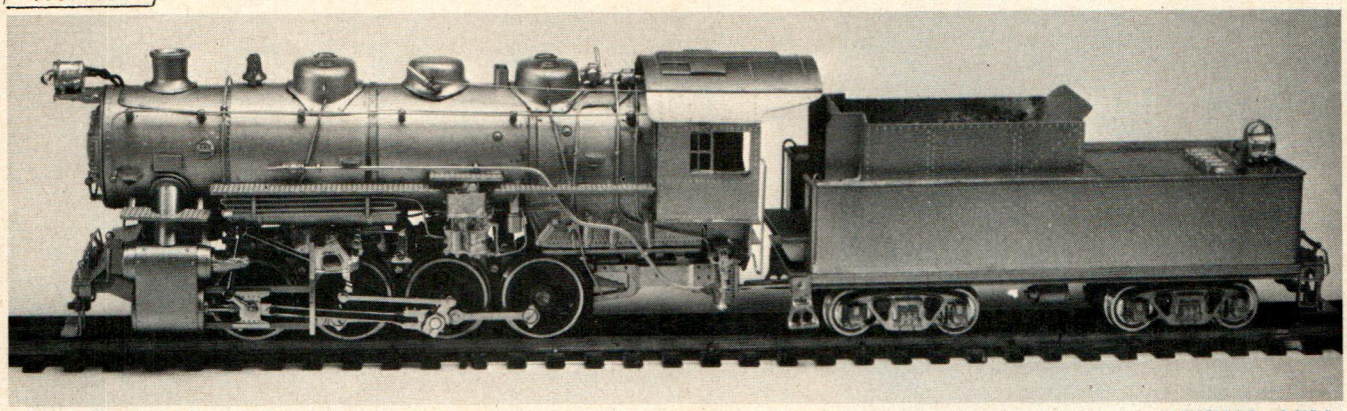
LOCO BUILDERS PHOTO - 223 — 4-6-2



PENNSYLVANIA K-4S PACIFIC — **HO** — **UNITED — PFM**

Pennsylvania Railroad prototype, series K-4s Pacific for heavy passenger service. This model represents the final arrangement of front end equipment. All-brass construction of sheet, coined, and cast parts. Lost wax castings by Cal-Scale. Pittman DC-70X motor with foating gear box. All drivers sprung and flanged. Overall length, radius 18 inches. Mfd. by United Models, Japan, for Pacific Fast Mail, P. O. Box 57, Edmonds, Washington 98020. Catalogued during 1960s. Not listed after 1964. List price assembled unpainted, $49.50. Consult current PFM catalog for possible reentry into line. For parts list, send stamped addressed envelope to importer. Canadian address: 5816 Cambie, Vancouver, B. C.

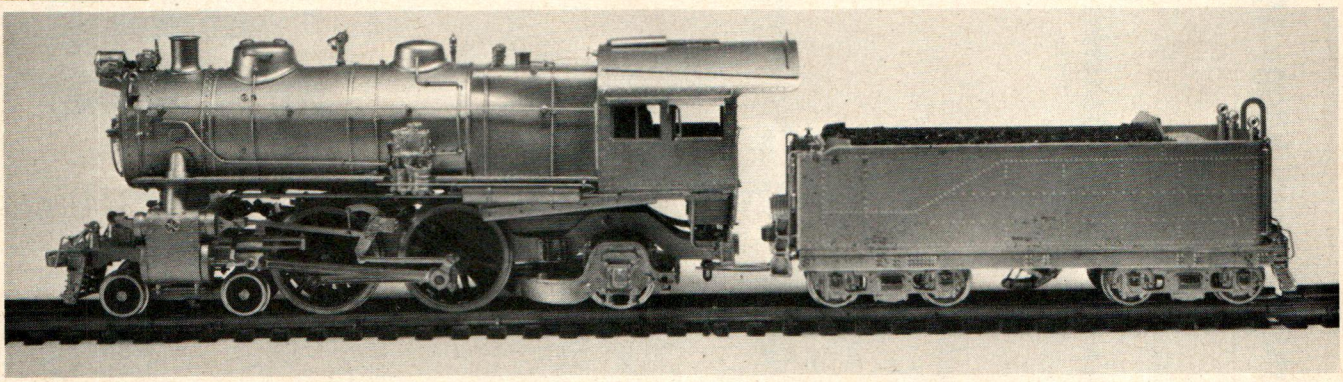
LOCO BUILDERS PHOTO - 224 — 0-8-0



NEW YORK CENTRAL U-3 SWITCHER — **HO** — **SEKINO-GEM**

USRA heavy switcher as modified for New York Central Railroad. All brass construction with sheet, coined, and cast parts. Mabuchi motor with floating enclosed gear box. Weight, 16½ ounces, minimum radius 15 inches, overall length 9½ inches. Manufactured in Japan by Sekino, Fuji Line Series, for Gem Models, 160 W. Chelten Ave., Philadelphia, Pa. 19144. July 1, 1965 list price, assembled unpainted, $42.95.

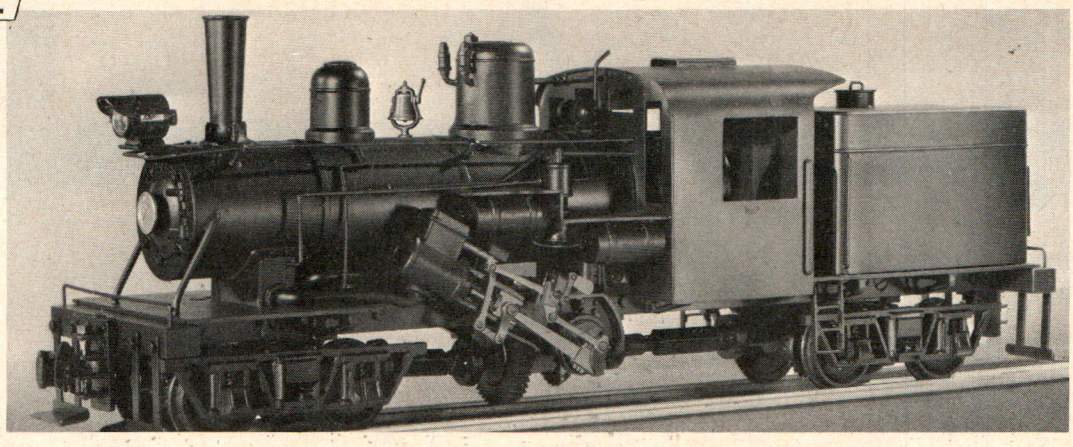
LOCO BUILDERS PHOTO - 225 — 4-4-2



PENNSYLVANIA E-6s — **HO** — **OLYMPIA-GEM**

Pennsylvania RR class E-6s Atlantic type for light, fast passenger service. All brass construction with sheet, coined, and cast parts. Olympia OM-12 motor with floating enclosed gearbox. All drivers sprung and flanged. Overall length 9½ inches, weight 18 ounces, minimum radius 18 inches. Mfd. in Japan by Olympia Precision Industry Co., Ltd., for Gem Models, 160 W. Chelten Ave., Philadelphia, Pa. 19144. When available, was furnished, assembled unpainted in satin brass finish. List price, Jan. 1, 1965, $44.95. Production runs are limited. See current catalog regarding availability.

LOCO BUILDERS PHOTO—229 CLIMAX



TWO-TRUCK CLIMAX 0¼" **LOBAUGH**

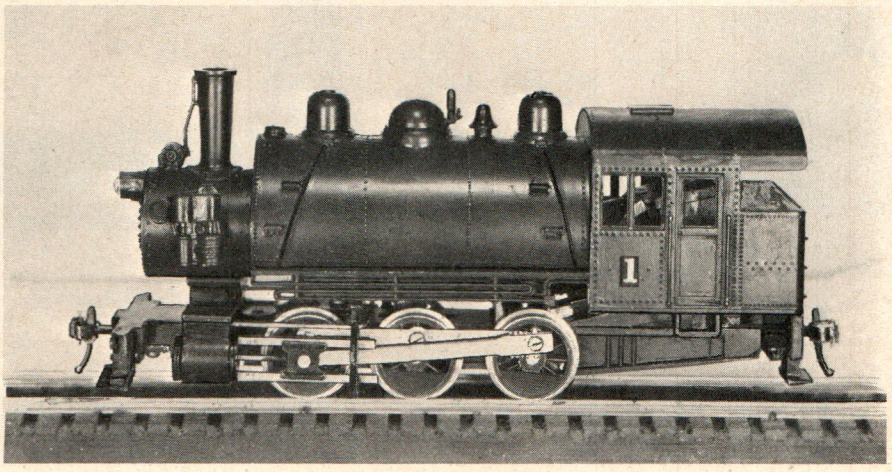
Prototype: 2-truck Climax locomotive for mining, quarry, lumber, and other low speed, steep grade, rough track operation. Brass and bronze construction with extensive lost wax fittings. Overall length, 11 inches. Minimum radius 18 inches. All drivers powered. Pittman DC motor. Sprung trucks. Mfd. by Lobaugh Scale Model Mfg. Co., 2621 Glendale Blvd., Los Angeles 39, Calif. Kit No. 16000, complete. Contact manufacturer regarding current availablity and price.

LOCO BUILDERS PHOTO—230 0-6-0 T

YARDHOG

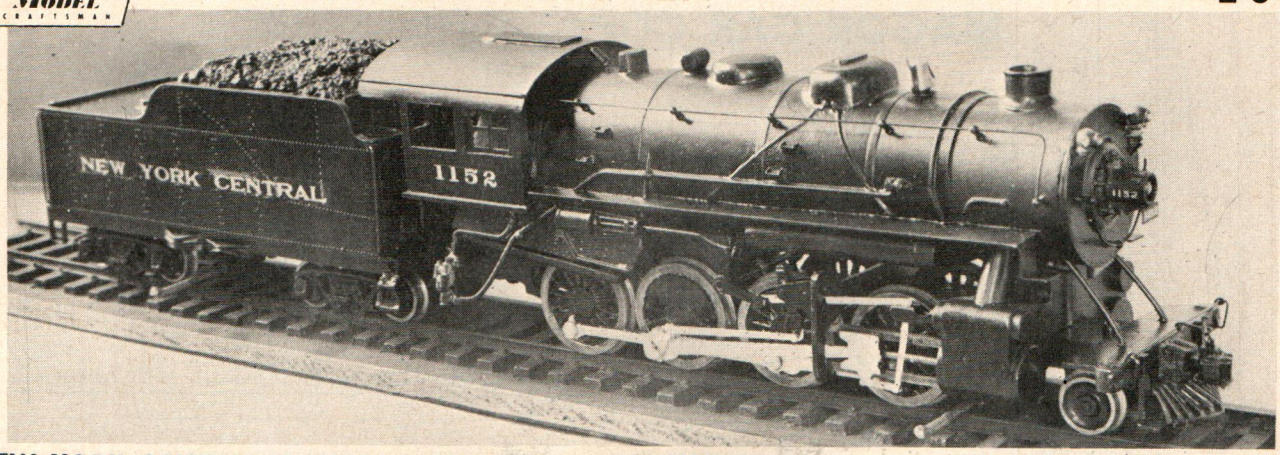
SADDLE TANK SWITCHER

Yardhog saddle tank type 0-6-0 switcher adaptable to various prototypes. Baldwin in design. Die cast Zamac frame and superstructure castings. Stamped and turned fittings. Pittman DC-60 motor with worm and gear drive. Minimum radius 15 inches. Catalog. Mfd. by Model Die Casting Co., P. O. Box 926, Hawthorne, California. Catalog 5L1. Model not currently available. Kit price, Jan. 1957, $14.50.



HO **MODEL DIE CASTING**

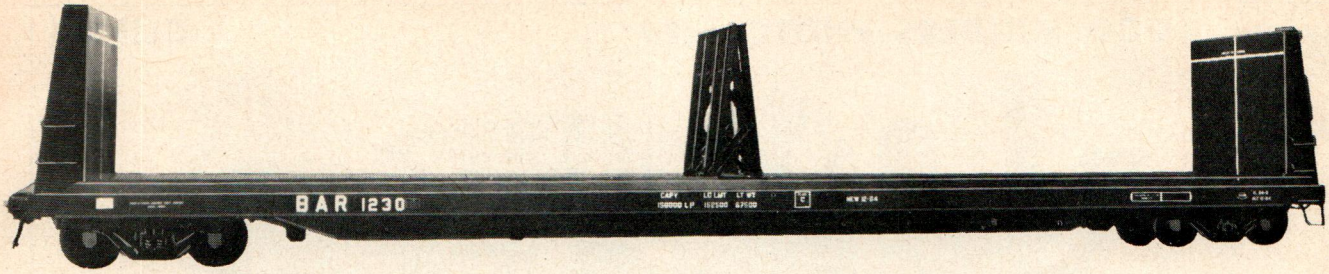
LOCO BUILDERS PHOTO—231 2-8-0



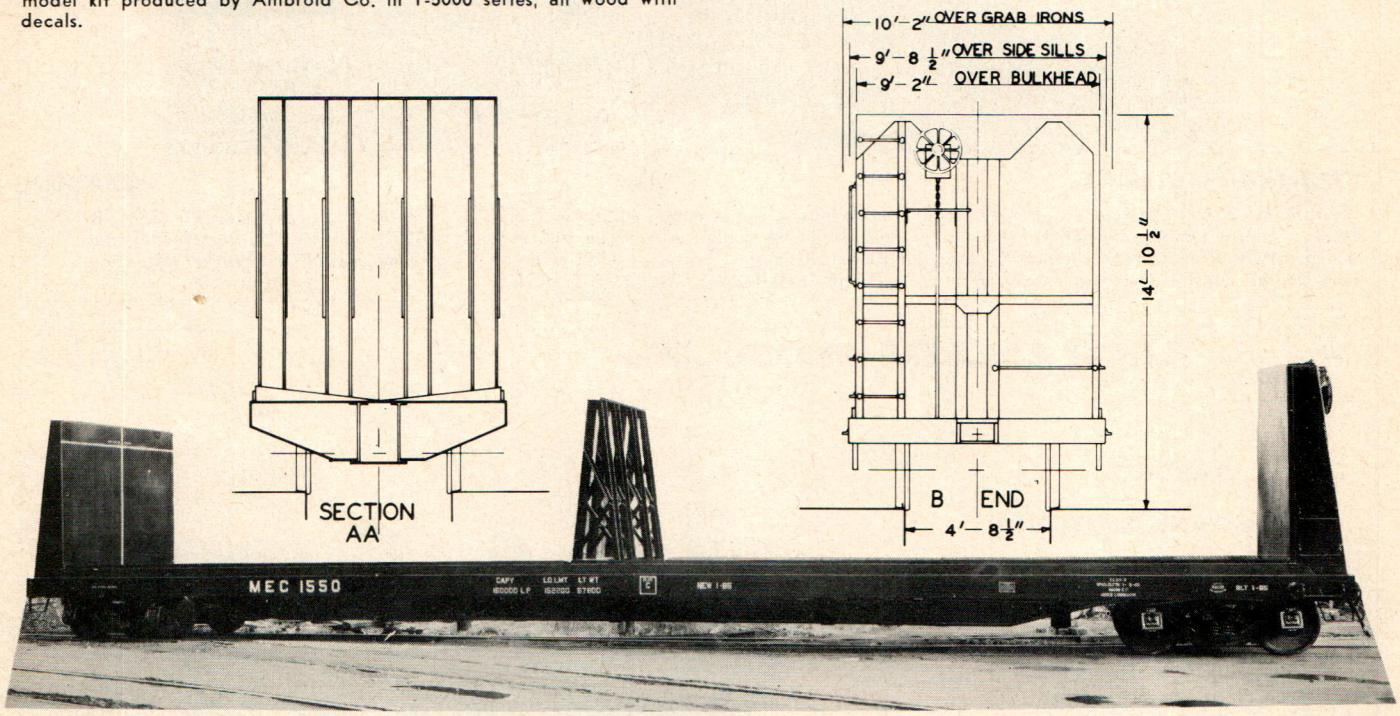
NEW YORK CENTRAL CONSOLIDATION 0¼" **SCALE MODEL RAILWAYS INC.**

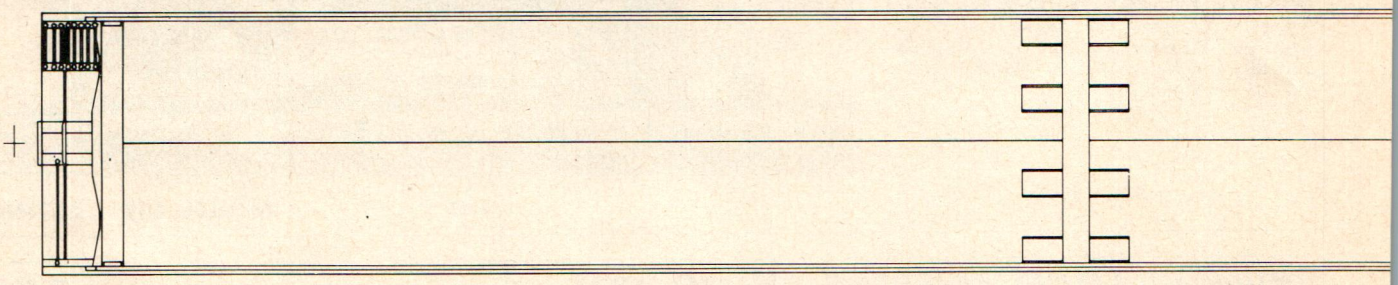
New York Central 2-8-0. All brass construction. All wheels flanged. Late production insulated for 2-rail. Produced from late 1930's through 1942. Scale Model Railways, Inc., Huntington, Indiana, became a part of the Megow Corporation, Philadelphia, Pa., about 1941. Megow went out of business around 1947. Production of the 2-8-0 was very limited.

CLASSIC



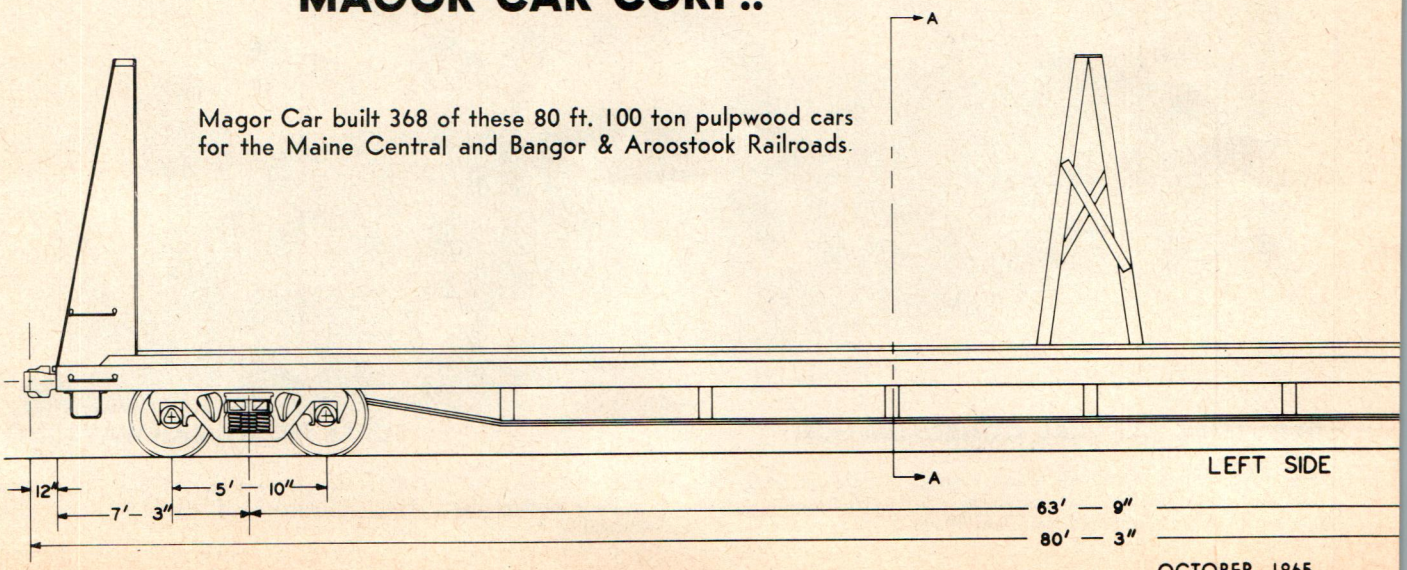
Bangor & Aroostook pulpwood car built by Magor Car Corp. HO model kit produced by Ambroid Co. in 1-5000 series, all wood with decals.

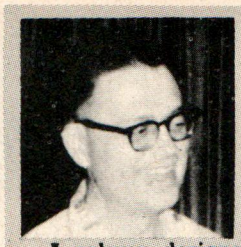




MAGOR CAR CORP.:

Magor Car built 368 of these 80 ft. 100 ton pulpwood cars for the Maine Central and Bangor & Aroostook Railroads.





THE OPERATORS

conducted by WHIT TOWERS

A column designed for better, more realistic model railroad train operation. Readers are invited to submit questions on the subject, c/o RAILROAD MODEL CRAFTSMAN, Box C, Ramsey, N. J.

FROM the mail it would seem that you who follow The Operators really enjoyed our first guest columnist, John Allen. The Wizard of Monterey who pointed out how we could operate more realistically. Last month's column by Doug Smith explaining operation on his Brook Valley Railroad also brought forth a heavier than normal mail. For all of you who wrote I want to again extend your thanks as well as my own to Doug for sharing his knowledge and experience with all of us.

Next month we will have the good fortune to have Dr. Roy F. Dohn of Montreal, Canada to act as guest columnist to tell us about some of the operating variations he and his group have developed for The Victoria Northern Railway. Dr. Dohn is well known to readers of RMC as a result of his many fine articles.

As the opportunity presents itself I'll try and get some of the other experienced and authoritative operators to discuss some phase of this subject with us. Remember, if you have some little kink or particular knowledge on the subject of operation whether it's prototype or model we'd all enjoy learning about it.

Bill Jenner of Los Angeles, California is a regular reader and contributor to this column with an inquiring bent of mind who in the past has furnished us with several choice bits to augment our knowledge of the subject of Operation. A while back you may recall I discussed the classes of trains and how this aided in dispatching and regulating train movements before the days of automatic signalling. I mentioned that at one time there were as many as five classes of trains in regular service on some railroads, though my own information wasn't complete enough to determine exactly which railroad actually used this many class divisions. Most railroads using the class system were content with using only two or three classes. Following a considerable amount of research and a flurry of letter writing Bill has come up with an example of the five classes which were used on the Chicago Division of the Chesapeke & Ohio Railway in the period of the first World War.

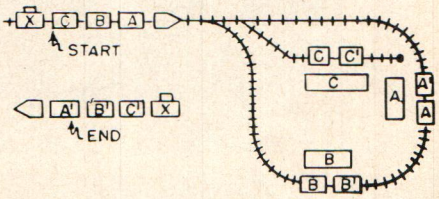
1st Class—Through Passenger
2nd Class—Local Passenger
3rd Class—Manifest Freight
4th Class—Other Freight
5th Class—Local Freight

Extra Trains could be construed as a sixth class. By the early 1920's all passenger trains were being run under a single class and in 1953 all class distinctions were eliminated when the division was put under CTC control.

We're indebted to Bill and the C & O Public Relations Department for this information which shows us that if we operate older period pikes we might well be using several class distinctions on our timetables, but if we're really modern and operating under modern day signalling practices we can have no class distinctions other than extras in planning our operations.

It's been a while since I've included a switching problem so how about trying your hand at this one? It's adapted from an actual switching problem on John Allen's famous Gorre & Daphetid Railroad. Like a couple of the problems in past issues it was worked up by Cliff Robinson and Jack Leming for a Lone Star Regional Convention and printed through the courtesy of Bobbye Hall's Hobby House in Dallas, Texas.

SWITCHING PROBLEM



The problem:

Swap Car A for A'
B for B'
C for C'

Train should be facing in opposite direction and in order shown at 'end' when you've finished.

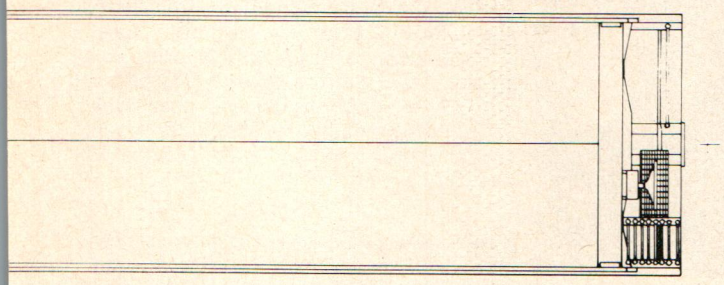
Restrictions—

Engine is not allowed to handle more than six cars (or five cars and caboose) at one time.

Spur "C" will hold only four cars clear of fouling point.

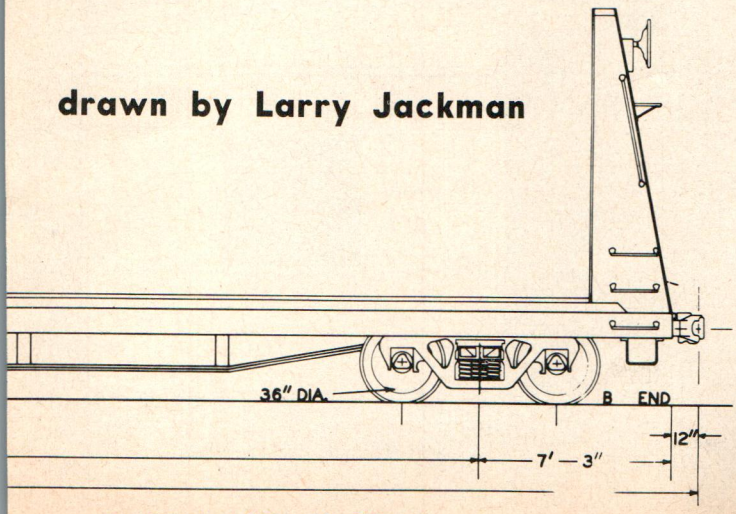
The solution, though I hasten to add this is only a suggested solution to the problem, will follow. It's fun working out your own solution, and if you can do it in fewer moves how about sharing your method with the rest of us? As with past problems I'll

(Continued on page 53)



PULPWOOD CAR

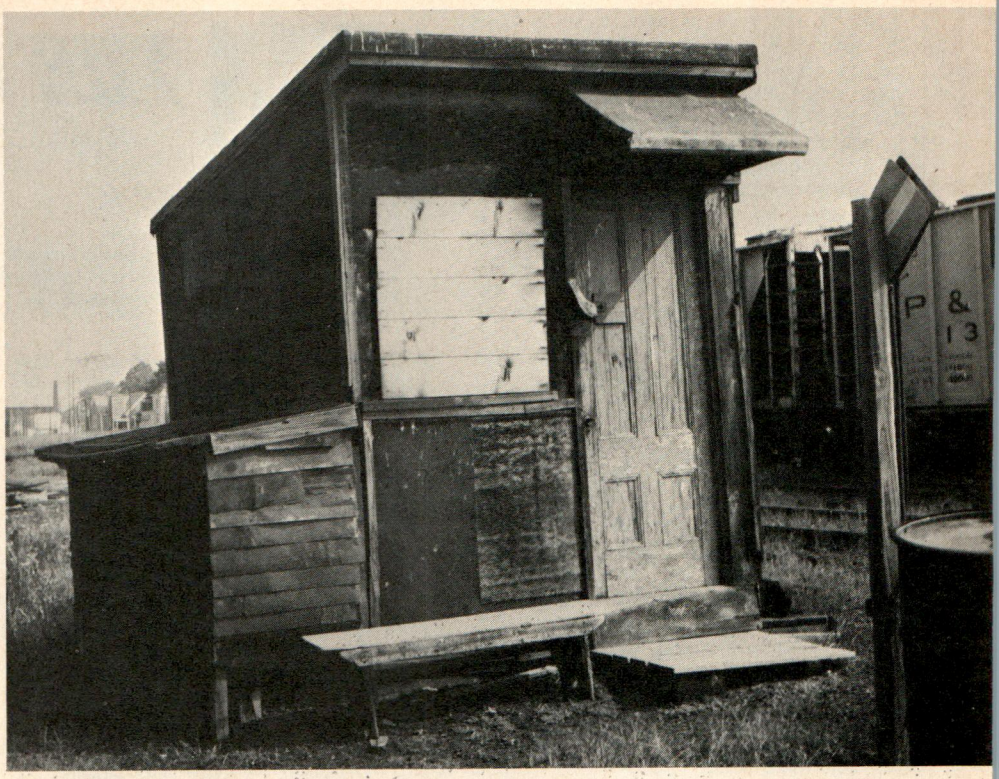
drawn by Larry Jackman

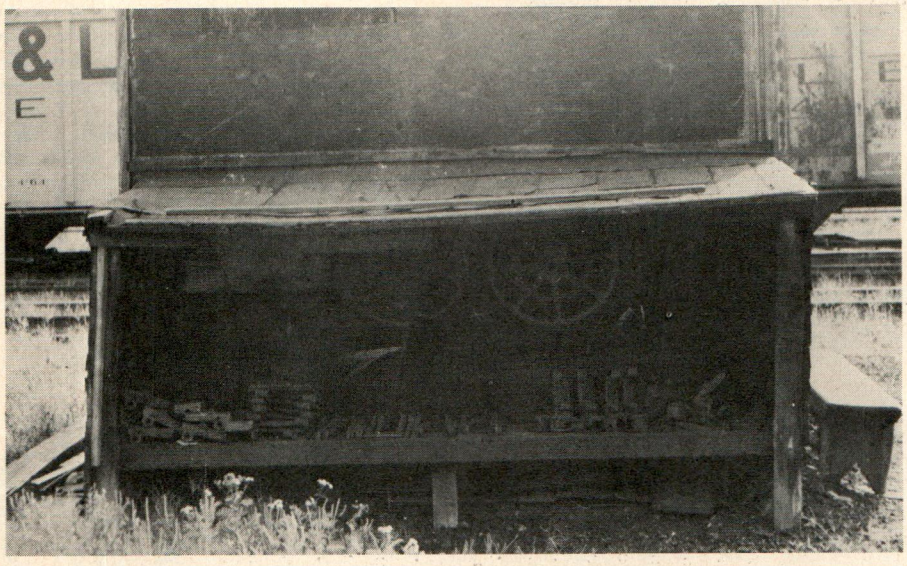


B&M PARTS SHED

by James D. Frary

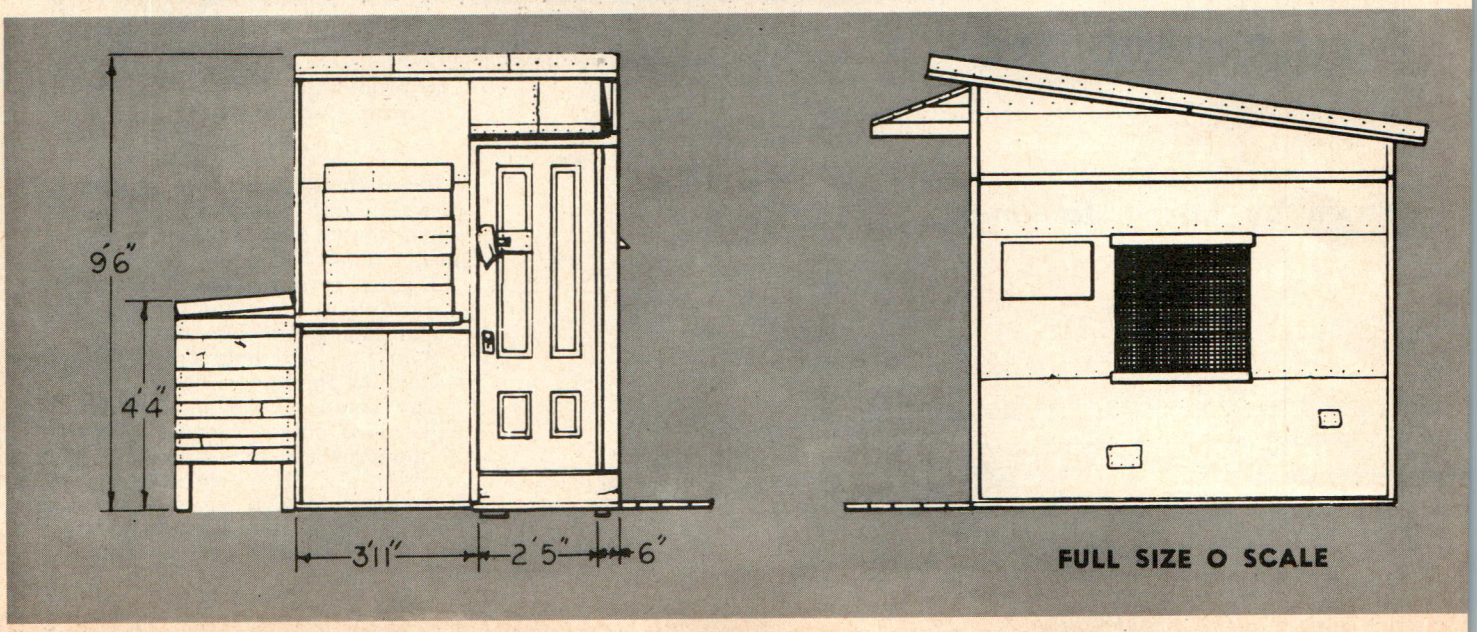
This small car parts shed assembles easily in an evening or two. Look for the prototype on the Boston & Maine in the yard at Salem, Massachustts.



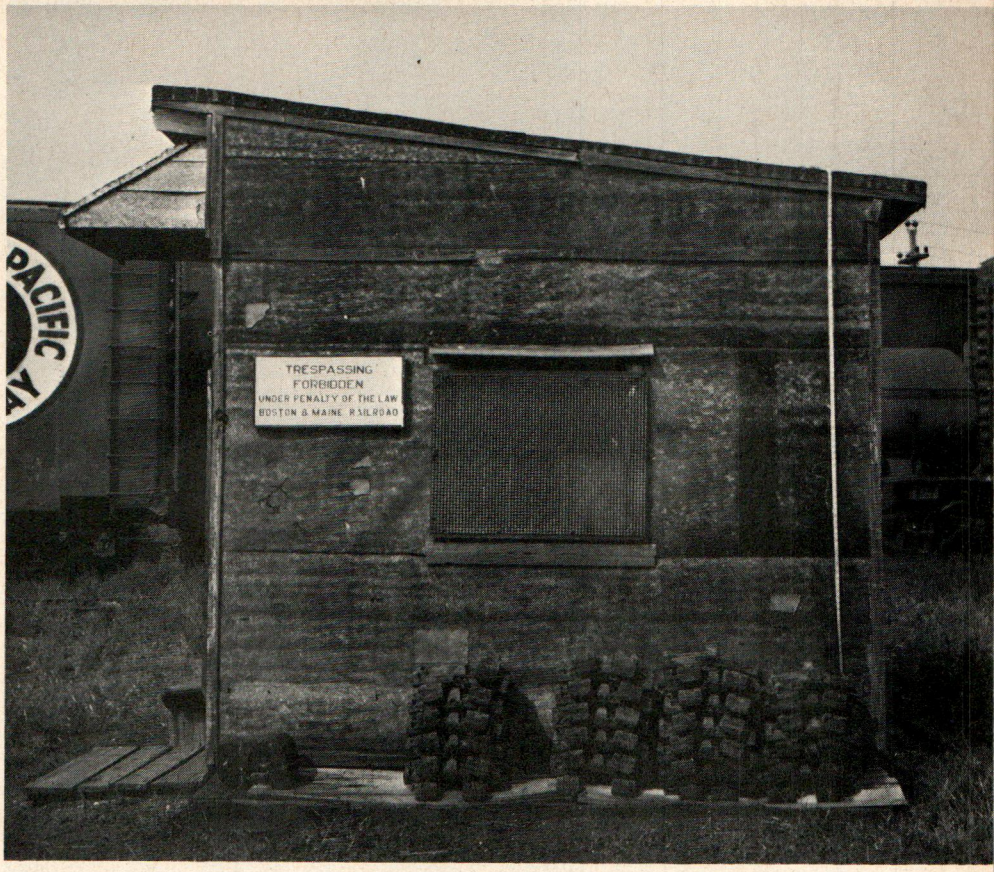


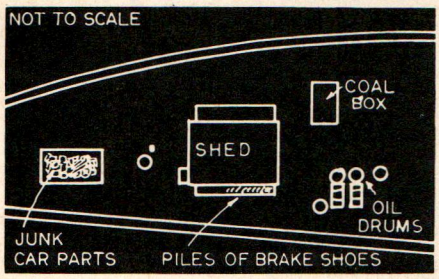
THIS tiny structure is located in the Boston & Maine yard at Salem, Mass., and is typical of many such structures to be found all around the country. Apparently used as a headquarters for the maintenance crew, the area around it is cluttered with spare brakeshoes, brakewheels, and other car and track hardware. Its real character is found in the "slap-dash" tarpaper construction, and if carefully modeled, this little shed could be an eye-catching foreground gem to draw 'Ohh's and 'ah's from your visitors. Don't forget to add an oil-drum rack and coal bins, with plenty of those extra car parts from your scrap box scattered around.

Brake wheels, brake shoes, and assorted other spare parts are found in the attached shed.

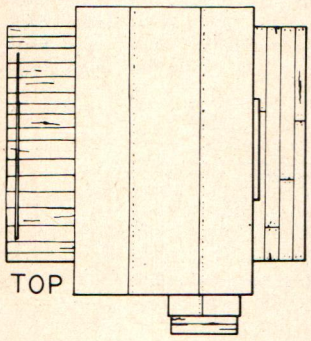


Screened window and more parts are found on the opposite side, along with a "no trespassing" sign. Tarpapered side have been patched.

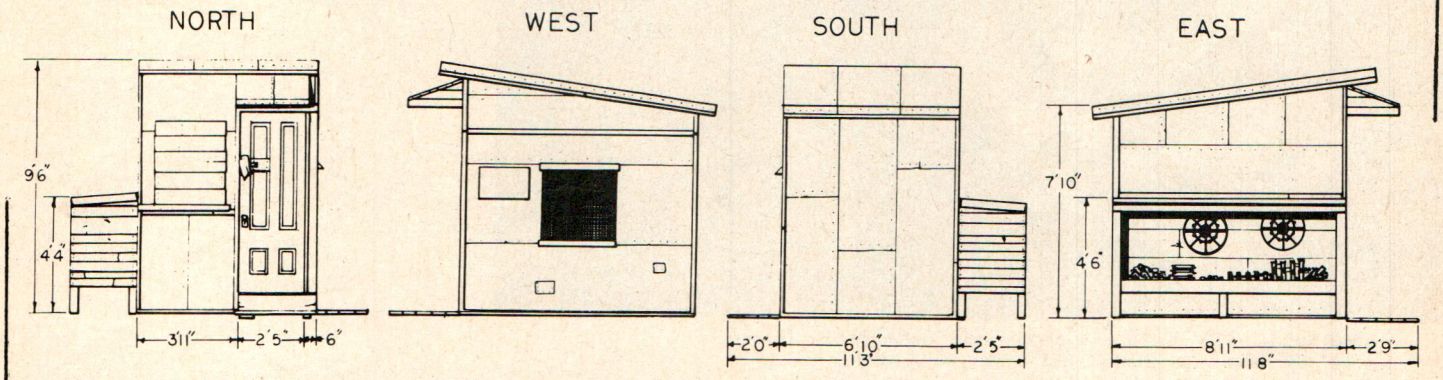


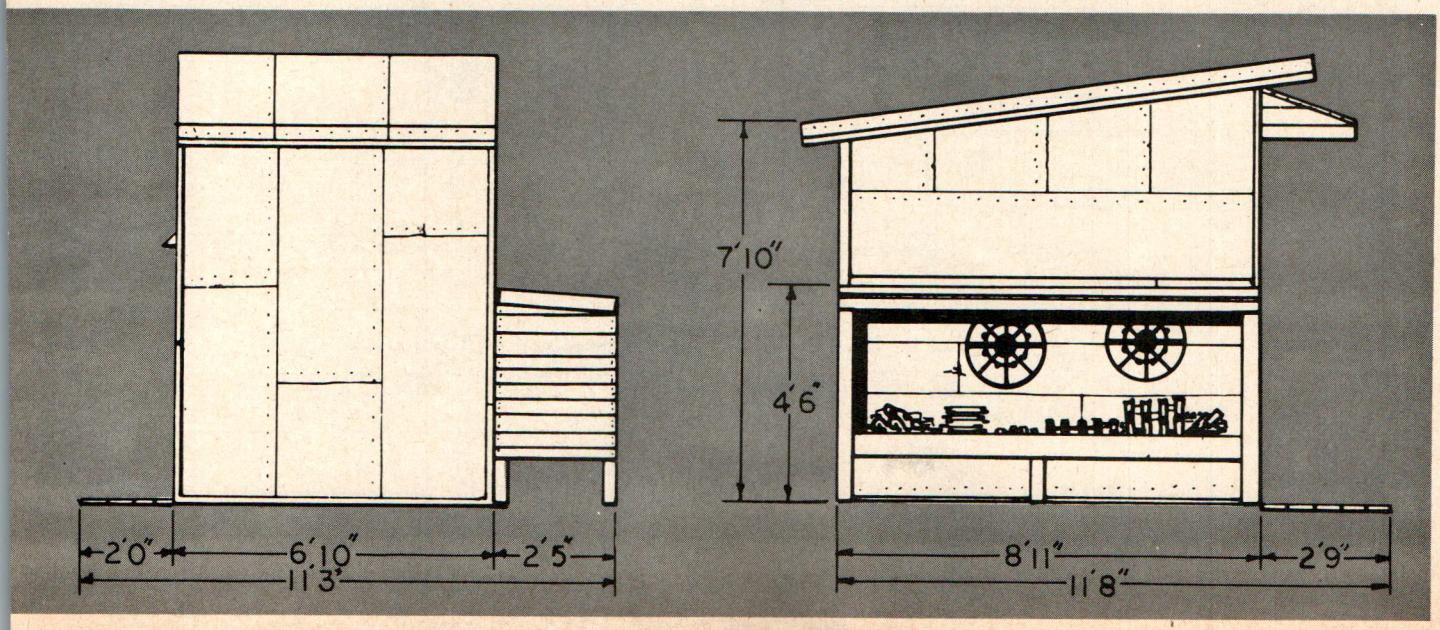


Plan of the area shows how the car parts shed fits between two tracks, along with a coal box, junk salvage bin, brake shoes, and oil drums.



FULL SIZE HO SCALE





ALCO CENTURY 855

5500 HP: 1964

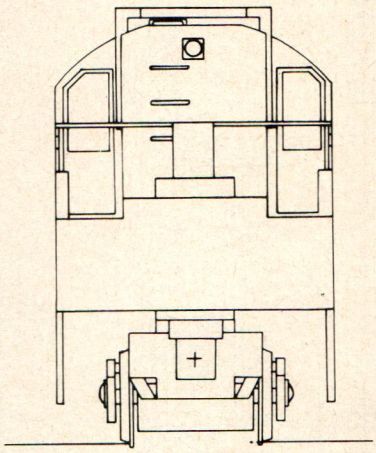
Giant Alco Century 855 diesels were the most powerful diesel-electrics ever built when introduced, delivering 5500 hp. on axles.

drawn by Larry Jackman

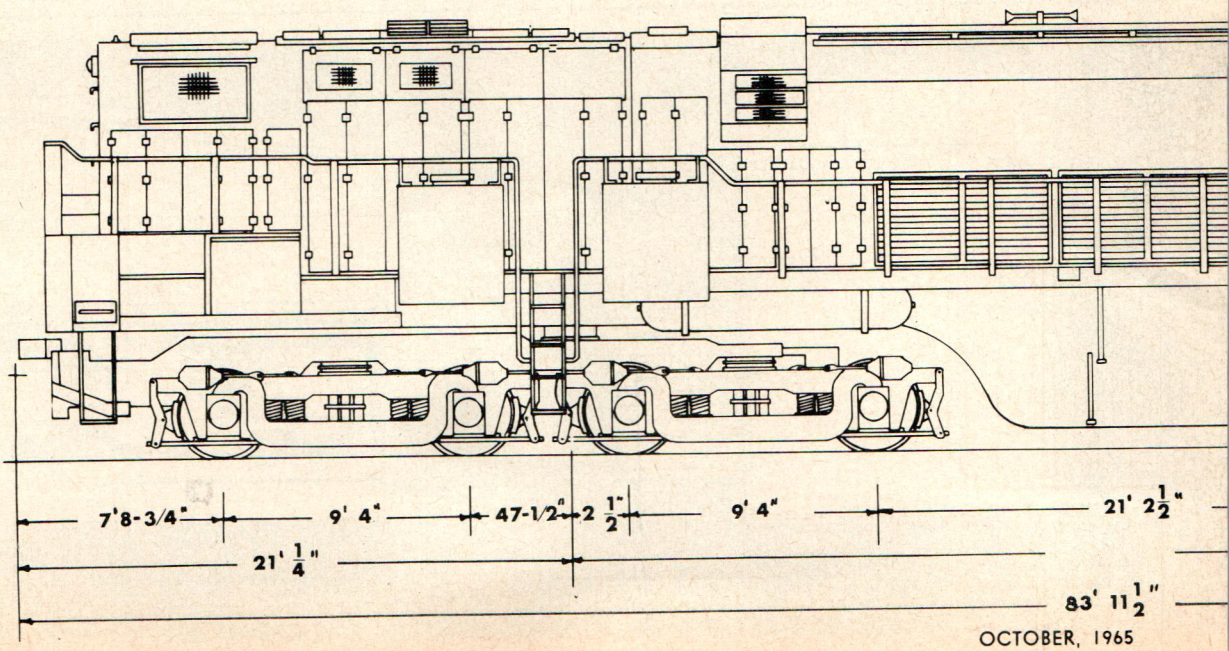
TECHNICAL DATA

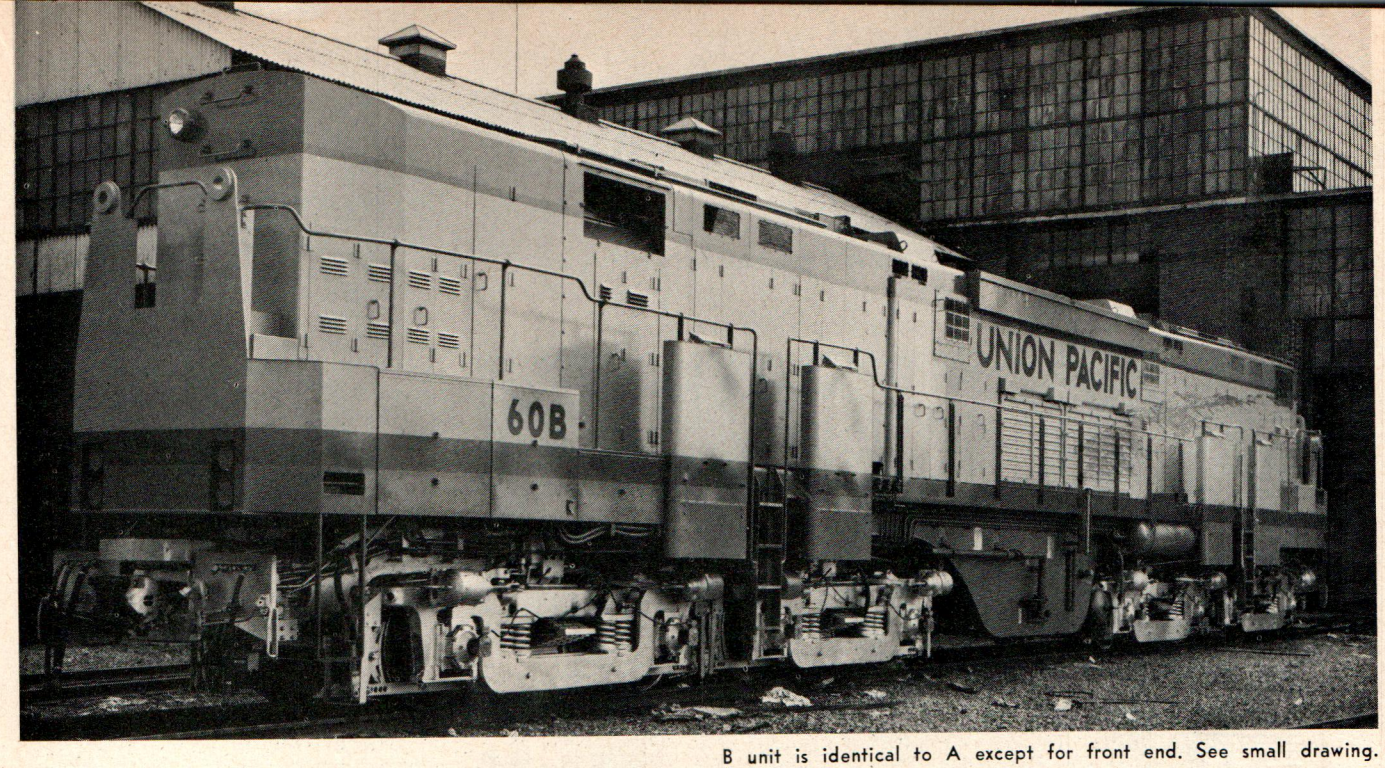
Horsepower per unit	5500
Diesel engines	Two 16-cylinder Alco Model 251-C
Operating cost per mile (1965)	$1.11
Service	Long haul, high speed

16,500 hp. is on the head end of this long Union Pacific freight headed by three Alco Century 855 units: two A diesels and a B.

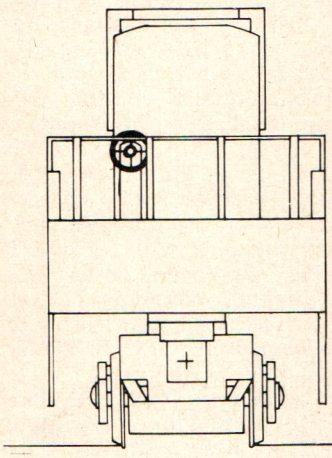


A UNIT REAR

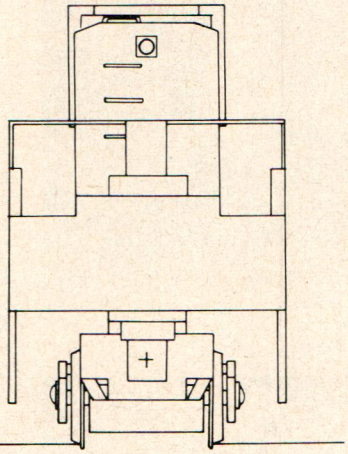




B unit is identical to A except for front end. See small drawing.

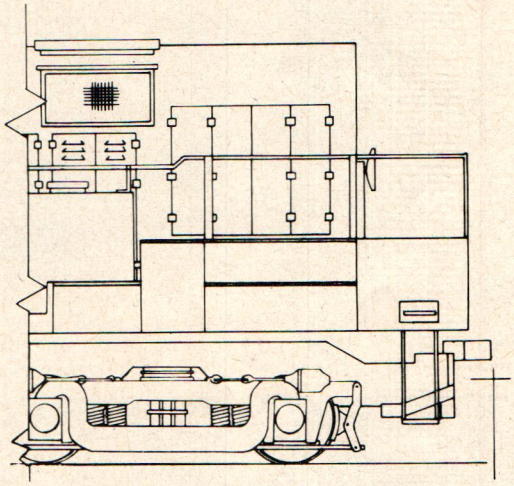


B UNIT FRONT

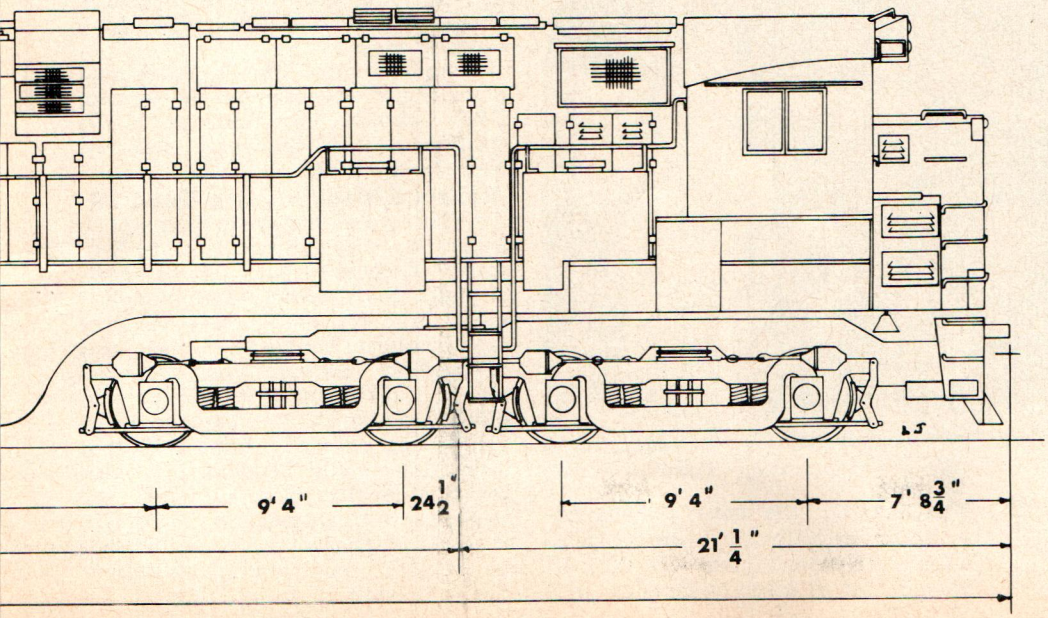


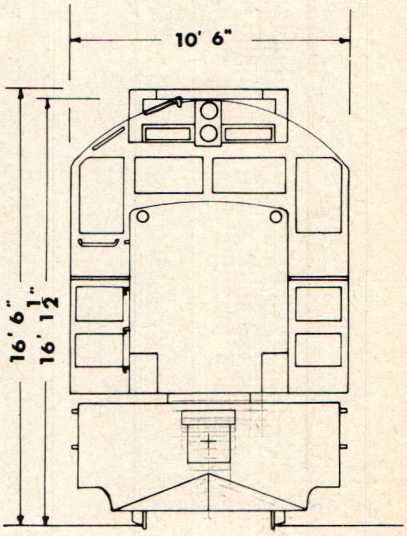
B UNIT REAR

Other detail same as A Unit



B UNIT FRONT END

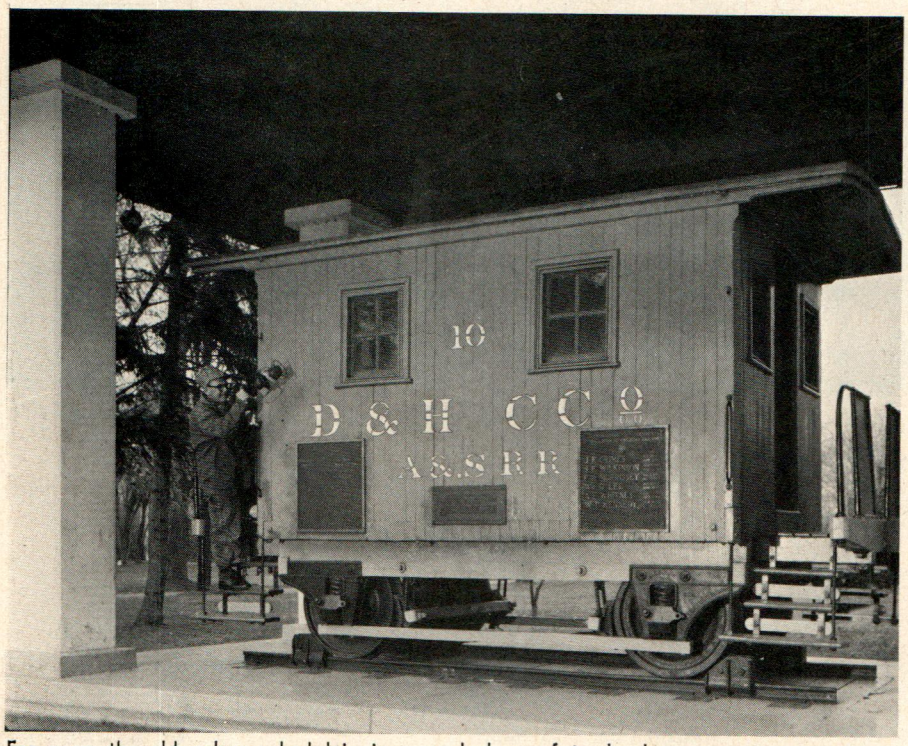




A UNIT FRONT

The Birthplace of the BRT

On a cool September evening in 1883, eight men sat in D&H Caboose No. 10 and organized what was to become the largest of all the operating railroad unions: the Brotherhood of RR Trainmen.



For years the old caboose had lain in a yard shorn of trucks. In 1924 the D&HRR, at its own cost, restored the car with trucks from a similar caboose. Plaques on sides give history, president's names.

The birthplace of the Brotherhood of Railroad Trainmen is today enshrined in a quiet Oneonta park, not far from the busy Delaware & Hudson.

PROBABLY the most famous caboose in railroad history, Delaware & Hudson Canal Co. No. 10, played host to a secret meeting on a cool September evening in 1883, when eight railroad trainmen met there and organized what was to become the giant 200,000 member Brotherhood of Railroad Trainmen. In an era of giant railroad monopolies, the trainmen felt a strong need to organize. And they did.

The caboose eventually became a trackside shanty, shorn of its original couplers and trucks. In 1924, the Delaware & Hudson Railroad recognizing its historic importance restored the car using replacement parts from another caboose of the same period. The car is now enshrined at Oneonta, New York, and appears much as it did back in 1883 for the addition of commemorative plaques on the car's sides.

BTR Contest

The Brotherhood of Railroad Trainmen is sponsoring a contest for building a model of the caboose. The contest will be held in cooperation with the NMRA. Top prize, to be awarded at the 1966 NMRA convention in Cincinnati, will be $500 in cash. Second place winner will receive $300. Third place will be a life membership in NMRA or equivalent if already a life member.

In addition, regional contests will be held to determine the finalists. Regional prizes will include first place awards of a Unimat, or $100 each, second place winners will receive tool sets or $50 in cash, and third place winners will receive 5 year NMRA memberships or $20 cash. All winners, national and regional, will receive certificates of excellence signed by BRT president Charles Luna.

Contest rules are simple. Anyone is eligible except those building models professionally. Entries must be submitted through participating NMRA regions for judging as announced by the region. Regional winners will automatically qualify for the 1966 NMRA national convention finals. Entrance in this contest does not require NMRA membership. Judges will be modelers and working railroad men.

Complete entry blanks, rules, and plans may be obtained by writing BRT Caboose, c/o Railroad Model Craftsman, P. O. Drawer C, Ramsey, New Jersey 07446.

Railroad Modelers Are Good PR

"What we're trying to accomplish is really very simple," said BRT prexy Charles Luna. Luna feels strongly that railfans and modelers have largely been ignored by most organizations connected with real railroading. Despite this, modelers and railfans continue to do the best public relations job imaginable for railroading generally. Luna feels that something should be done in return for this loyalty. "I'm sure this caboose contest can become the first in a series of programs that will bring us in closer contact with many people interested in railroading."

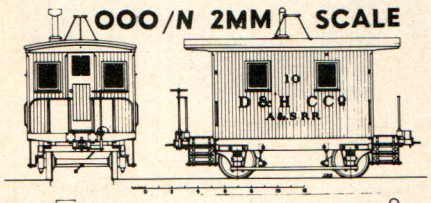
Charles Luna said that many railroads have been guilty of actively discouraging the interest of rail buffs, and that the rail unions have fallen asleep in this matter. Luna feels that the railfans from every major community could be a strong voice eager to help labor and management, simply because it would help railroading.

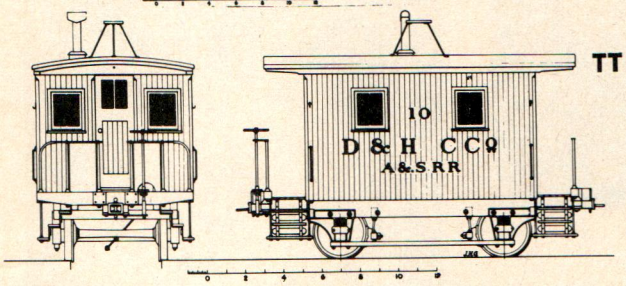
Luna's remarks will undoubtedly cause some repurcussions. Luna described model railroaders as "loyal but frustrated groups of railroading fans who, like puppies that are beaten daily, continue to wag their tails."

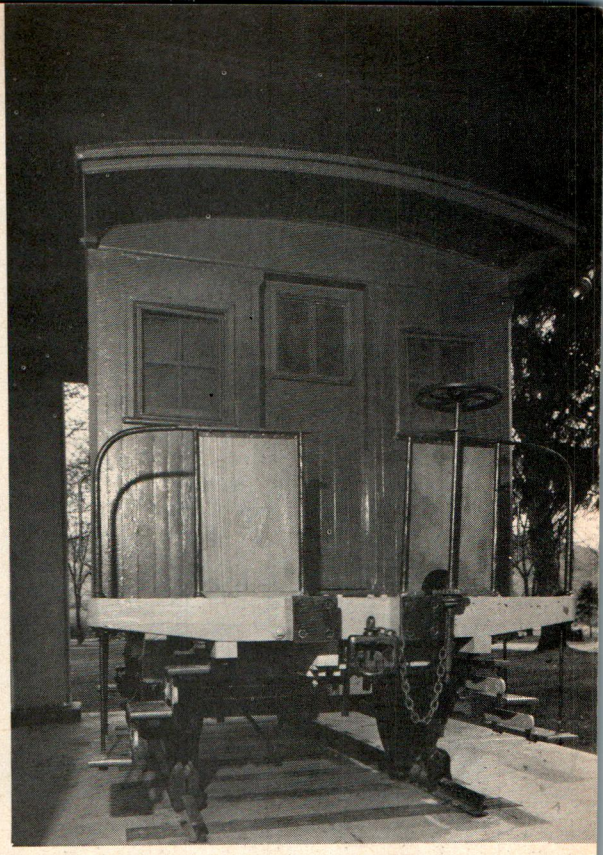
"Railfans have saved railroads from the brink of failure. They have established museums, published magazines, helped in legislative matters, documented railroad history and even contributed to the development of railroad equipment.

"In return they have been kicked out of freight yards, had their cameras confiscated, have had their simplest requests denied, and have been rudely treated on the trains they love.

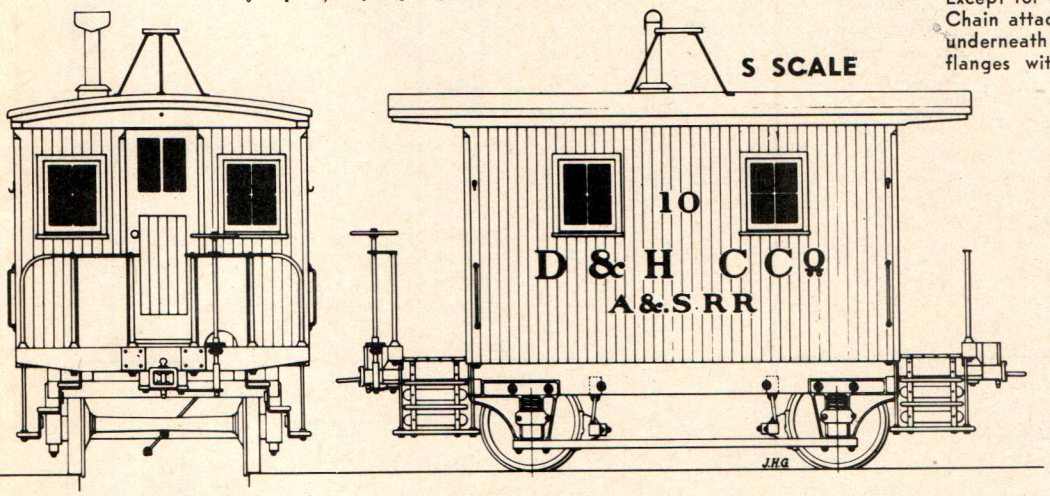
"This needs to be changed and will be changed as far as we're concerned. The modeling contest is our first step in this direction."

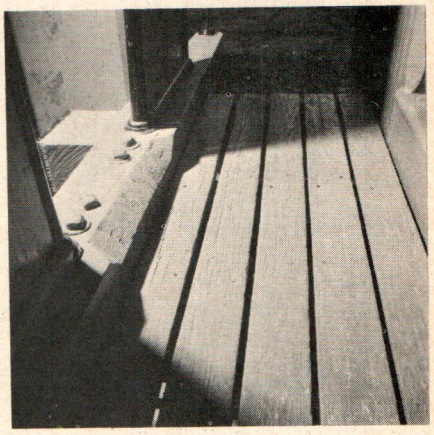




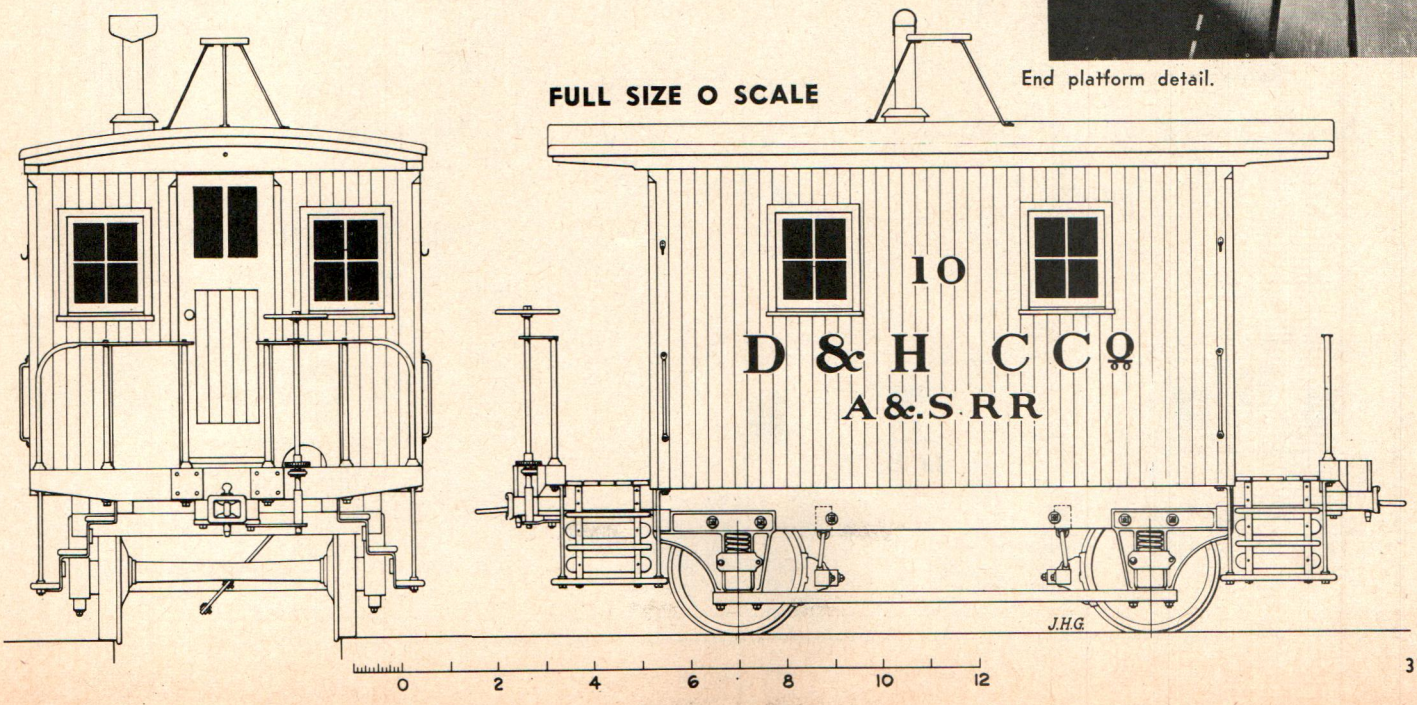


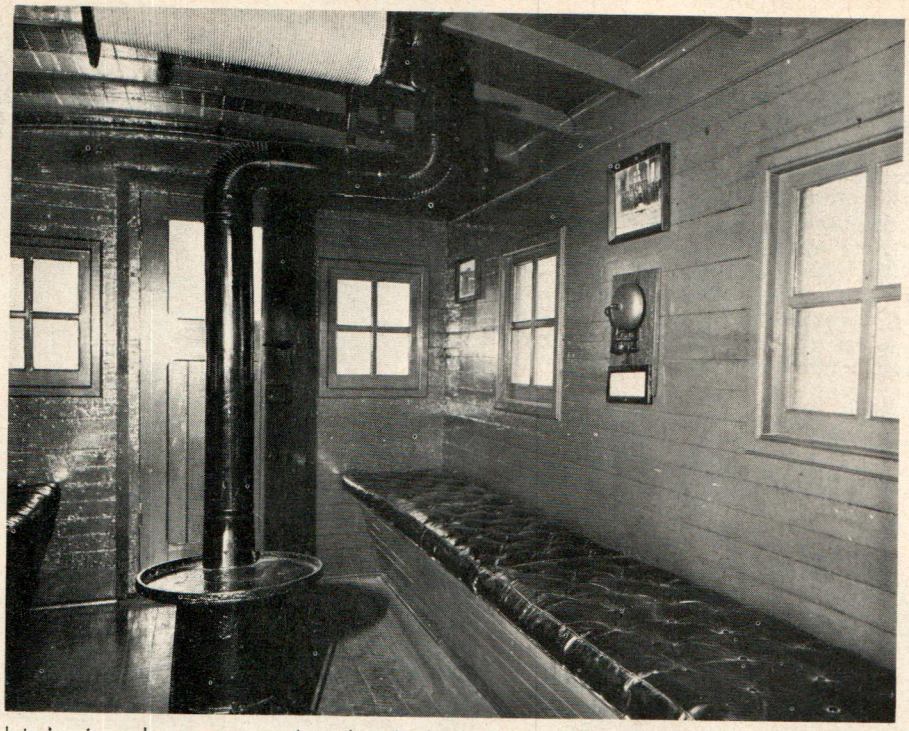
Except for brakestaff, both ends are the same. Chain attached to coupler should be fastened underneath car to brake gear. Compare small flanges with those used in scale modeling!





End platform detail.



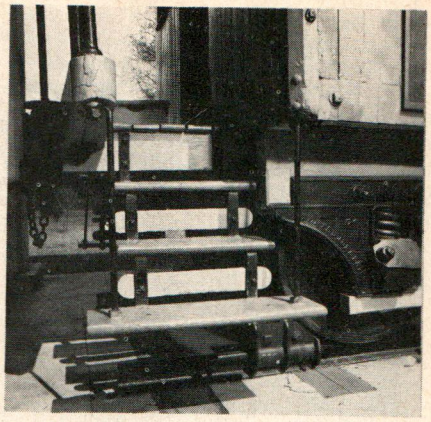


Interior is perhaps more spotless than back in the days of use. Here eight trainmen met to organize the giant BRT. Seats lift up to reveal storage areas. Photos on walls are recent addition; show caboose and officers.

Luna acknowledged that there have been attempts by some carriers to seek the cooperation of fan groups, including the Reading, Union Pacific, Baltimore & Ohio, Union Pacific, and Burlington.

Luna concluded, "we are convinced that at a time when public attitudes can make or break railroading in the country today, we cannot continue to play a giant game of dodgem with our most avid supporters.

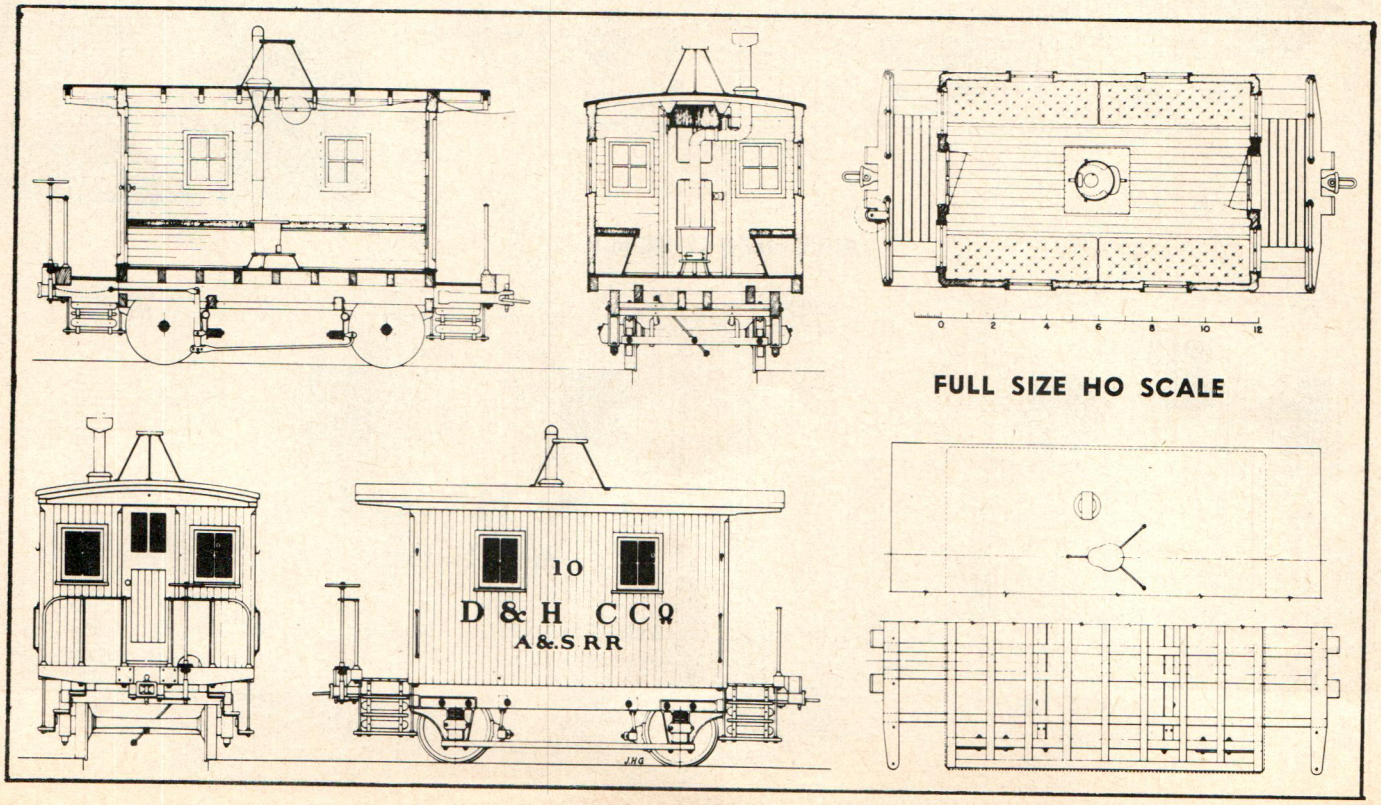
"The railfans know—that the carriers are facing some serious problems. They are willing and able to help us build a very bright future for the roads, and when the passenger business gets going as it should, they will be first in line for tickets."

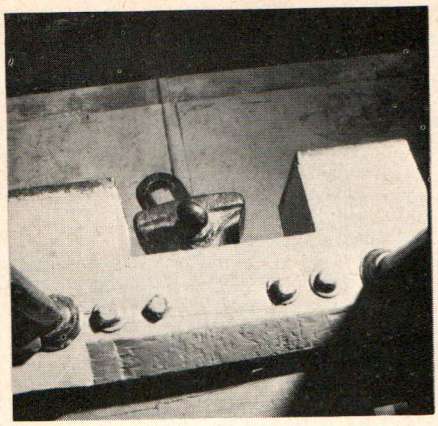


Step detail photograph.

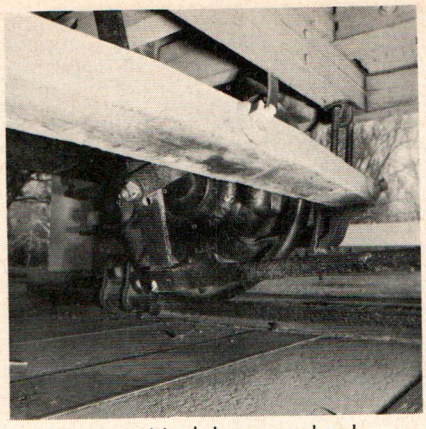
Brake lantern hung on hook bracket served as early marker light, adequate in days of old.

THE COVER: An actual full color reproduction of the D&H caboose accurately portraying the color of the prototype as it exists today. Ektachrome by Burns Bros.

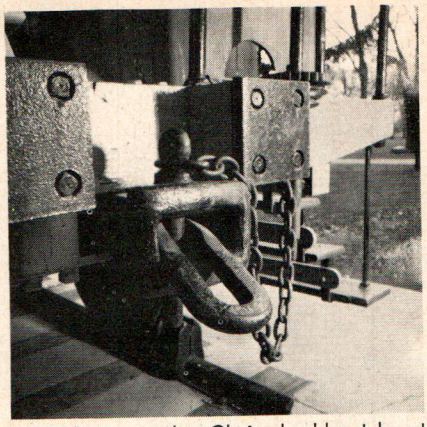




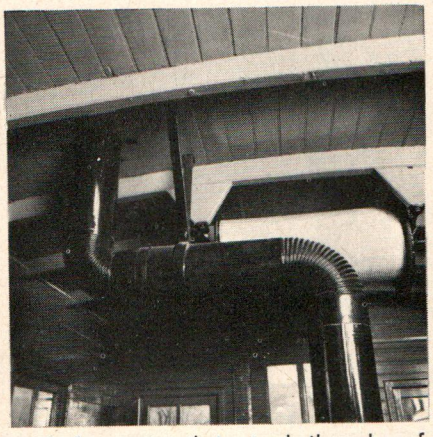
Coupler view from platform.



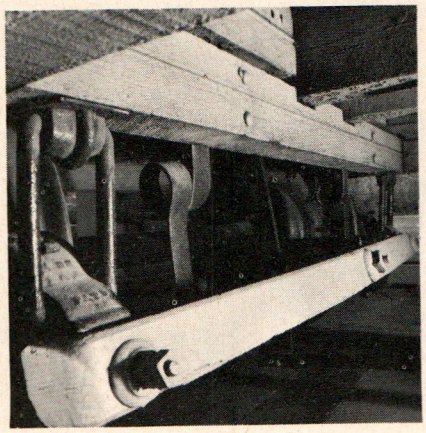
Another view of brakehanger and rod.



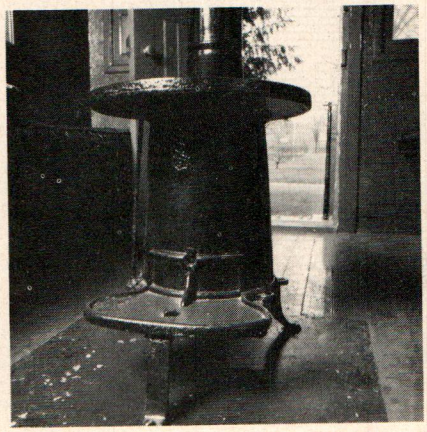
Link and pin coupler. Chain should not be attached to pin but rather to gear under car.



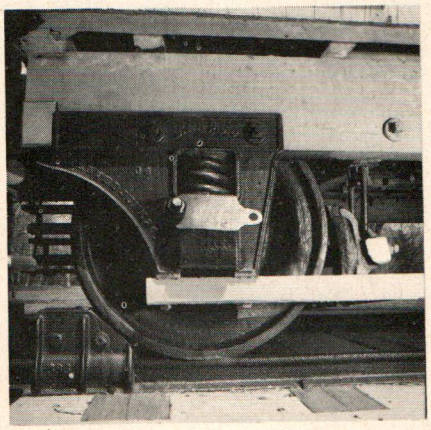
Detail of stovepipe that extends through roof.



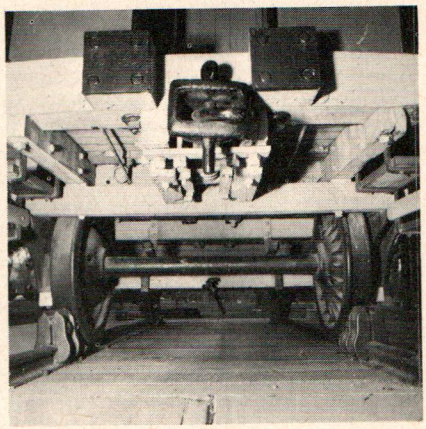
View of brake hanger and mounting.



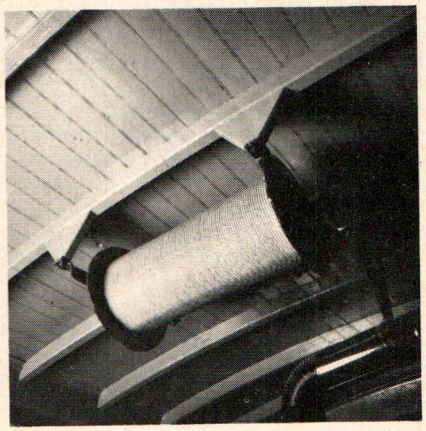
Stove polish black, simulated with Floquil!



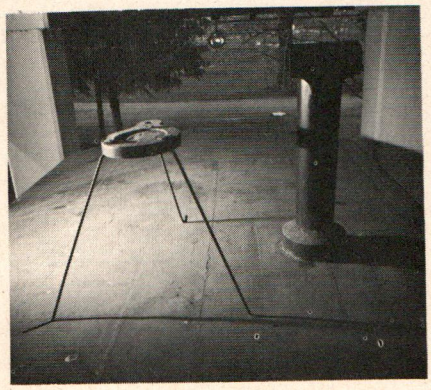
Journal box detail. Rear of wheel is webbed.



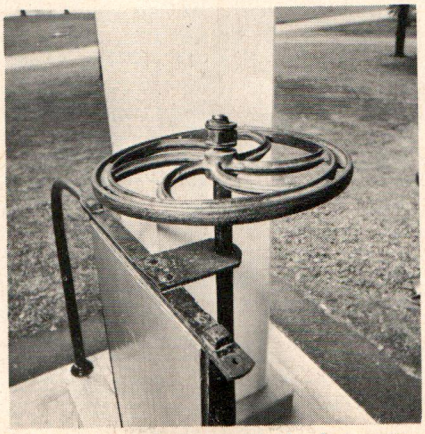
Underbody view shows chassis construction.



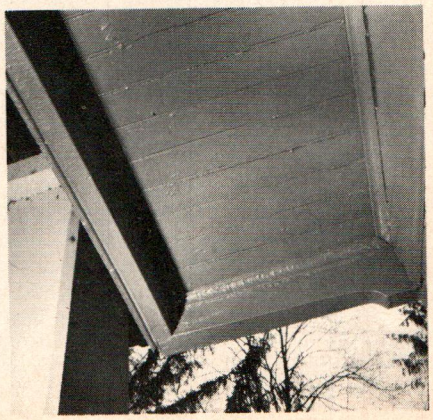
Cable reel hanger and rope which was strung forward to locomotive cab. A hard tug would ring bell in loco. Bell is shown in caboose interior view on these pages. Trains were short.



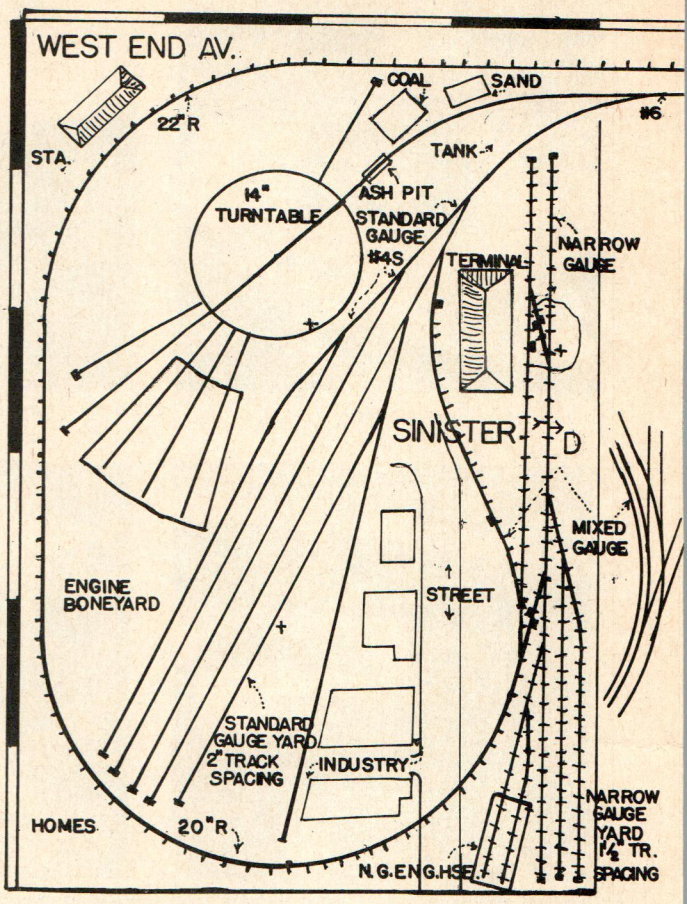
Freight cars were growing and the roof was the best place to keep an eye on the train ahead, hence this catbird seat on the roof



Brakewheel detail and method of mounting.



Long narrow shelving built on the wall offer an excellent, space saving means of expanding the layout. Carefull scenery work can make the apparent depth of narrow shelving appear almost infinite.



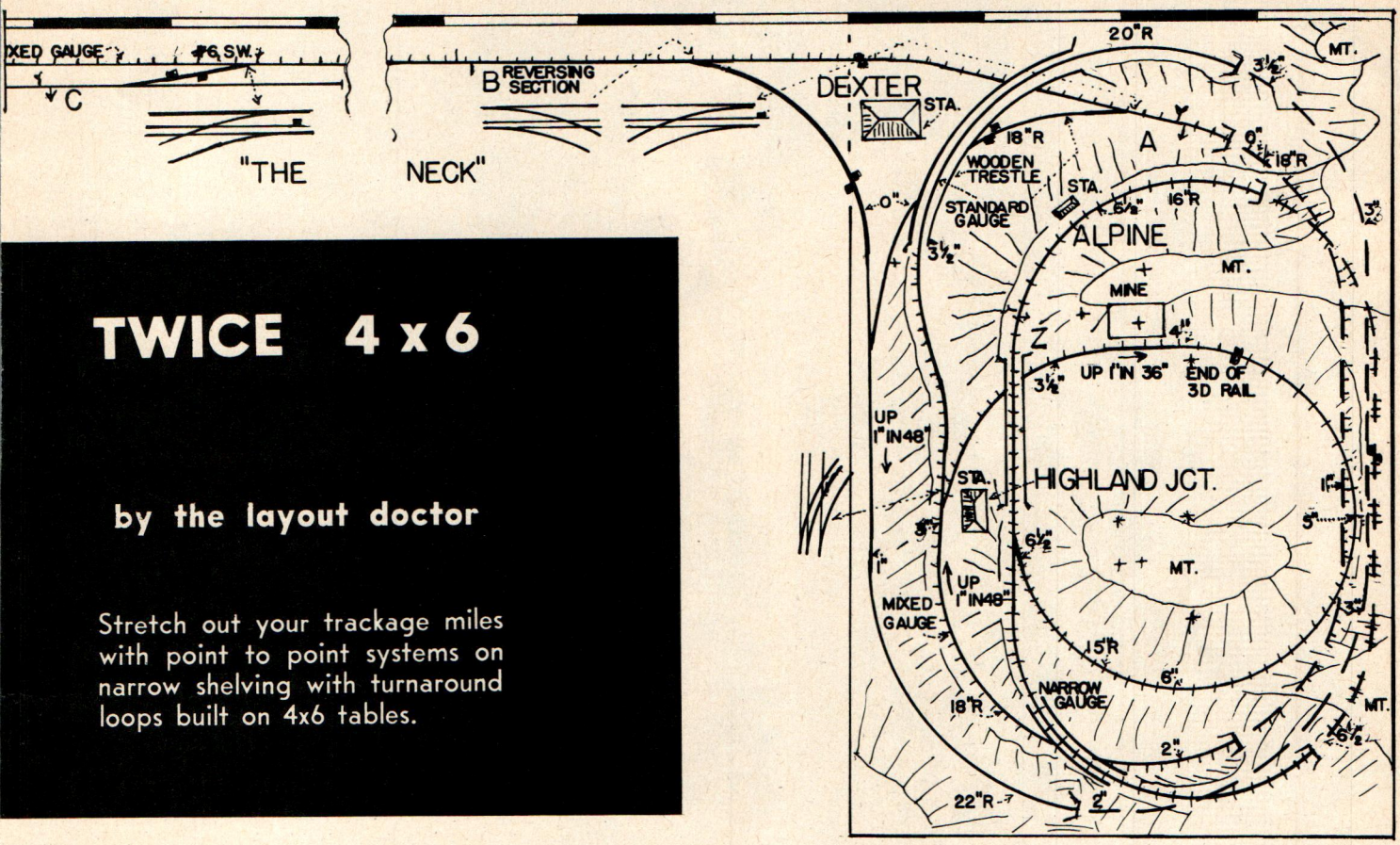
WITH four feet being a standard width for Homasote and plywood, it is not strange that many small layouts are built that wide, with lengths varying — six feet long is usually considered a minimum practical length in HO. Plenty of 4 x 6, 4 x 8, 4 x 10, and so on layouts have been built and will be built. Many times two such panels are put together in continuing table: two 4 x 6's making a 4 x 12 table; again they are put into an L-shape. This time how about putting two such tables into a long square-U shape? We'll build separate layouts on a pair of 4 x 6 tables, then connect these tables by a narrow "neck" which may run along a wall or around a corner of two. Indeed, the neck may spiral uphill, so that one of the 4 x 6 tables ends up a foot or two above the other!

As an example, here is the Dexter & Sinister Railroad which, as drawn, combines standard and narrow gauge HO scale track. At left, I've drawn a yard and terminal and reversing loop; at right, I've drawn a mountainous area; in between, I've indicated a simple narrow connecting "neck" which may be as long as you please—width is not indicated but is assumed to be a foot or less.

A lot can be said for building *either* 4 x 6 table first. The Sinister yard table is all flat track-laying and, if narrow gauge is not initially installed but just provided for, should have no great problems. Of course the neck should be continued out as far as the break, if not father, in order that you can do some switching. If your forte is track and switch laying, this is *your* place to begin. The Dexter mountain table, if finished first, would provide a fairly long inside-out figure-eight or twice-around oval run, with a minimum of "yard" or storage trackage—a spur at Highland Jct., and two spurs at Dexter which will later be shaped into a wye. If you like to build mountain scenery, this is your place to start. Some unsuspected problems crop up now. What would be the most suitable type of track, roadbed, switches, etc. to use on a model pike that is later to be dual-gauged? To begin with, the plan is drawn to utilize regular No. 4 switches wit ha 14° frog angle, not Custom-Line "No. 45" which have a 12½° frog angle. Save for non-deadening of track by these insulated frog switches, only the location of the switch motor housing need be considered, for the 1½° difference in angle could be taken care of—no sweat. And only one switch motor would need to be re-located to the other side of the track, the one immediately to the left of the "T" in Terminal on the Sinister panel.

For the D&SRR I have come up with this recommendation for track in to-be-mixed-gauge territory: use wooden roadbed, either plain flat wood with flexible track and Atlas kits, or Tru-Scale milled roadbed and switch-blocks, with the same switch kits or equivalent spiked down. Of course at such spots as just below Sinister station where the narrow gauge yard begins, you will at the beginning put in switch blocks, even though the switches, later to be installed, will be narrow gauge only. Outside of mixed gauge territory, use any track, switches, or roadbed you please.

The third rail for narrow gauge will present no great problems. You simply spike it in place, noting (as per switch diagrams) that the rail common to both standard and narrow gauge is on the side *with* the hatch marks. If you begin work on the high 16" radius Alpine oval on the Dexter table, you will have strictly narrow gauge track to build, with one switch at the front to swing down hill and around 15" r. curve to joint the end of the Highland Jct. spur. The switch at Highland Jct. is the only full mixed gauge switch (No. 4R) on the whole layout. It doesn't take much thought to suggest to yourself that this need not be a full switch, since the dual gauge extending a foot more up-hill is of little value except for switching. But the particular turnoff of mixed or narrow gauge from standard gauge away from the side of the common rail is one of the tougher types to build—so why not get the advantage and appearance of at least one com-



TWICE 4 x 6

by the layout doctor

Stretch out your trackage miles with point to point systems on narrow shelving with turnaround loops built on 4x6 tables.

plete mixed gauge switch? They can be bought, if you fear to make one, but then if you fear very much, maybe you don't belong in narrow gauge at all: one of its fascinations is that it is not all cut and dried as regular HO has become!

From Highland Jct. the third rail curves around and down along the right wall to pass through both switches at Dexter, as indicated by the diagrams which are offset to the left for convenience in drawing. Notice that these are not mixed gauge switches, but simply standard gauge switches with a third rail run through. What you do is start behind the switch—from the frog end—and lay the inner third rail up to the closure rail, taper it to fit, and solder it in place. Then you file or grind a flangeway through said closure rail, then continue the running rail after filing it, too, to fit and soldering same to other side of closure rail, and filing a flangeway through it. It is easier to do than to explain. There must be an additional guard rail for this new frog, and the inner third rail may need to be filed out at the bottom to avoid hitting the throw-bar, etc. of the switch being thus partially dual gauged. Note that there should be an insulated joint ahead of each such switch so that throwing the standard gauge switch will not short out the track via the new narrow gauge frog. The insulated joint need not be as close to the switch as drawn, but may be more conveniently placed: the one for the No. 6L switch on the left part of the neck also serves for the No. 4R switch leading to the Dexter standard gauge wye.

Below Sinister where the narrow gauge yard diverges, the standard gauge inner rail (of the curve) continues right on through, all switches being strictly narrow gauge as drawn. You will, however, have to add a few extra guard rails, opposite the narrow gauge frogs, on that inner standard-gauge-only rail. Put them in with spikes or cement, being sure they fit snugly base-to-base against the running rail even if you have to cut recesses for spikes or staples.

I show no turntable for the narrow gauge. A small one might be appended near Sinister station, extending beyond the edge of the table. Another way would be to continue the mixed gauge track through the yard ladder switches past Sinister station, then through a full mixed gauge switch at entrance to turntable lead track. Engines could then back into the present turntable, although the three-rail mixed gauge track would have to "swish" into four rails — narrow gauge rails centered between standard gauge — before getting to the turntable.

Controls are needed as follows: A is the main line trackage (standard and mixed gauge) on the Dexter table, while Z, when you get to it, is the narrow gauge only part—don't miss the pair of insulated joiners at the back of the narrow gauge oval. B is the neck and is a reversing section, meaning that it MUST have a separate direction control from the other parts of the pike. C is the yard for standard gauge, while D is the narrow gauge yard. It might be desirable to insert another pair of insulated rail joiners—nay, trio, one for each rail — just behind the sand tower, in order that the approaches to the narrow gauge yard would be controllable separately from the connecting neck trackage.

The reversing section idea could be eliminated by doing away with the No. 6R crossover on the Sinister part of the neck, and continuing the second track all the way over to Dexter where the No. 4R switch for Dexter wye would be eliminated. You'd also have to do away with the curved part of the wye to the right of Dexter station, which passes under the curved trestle. Such simplification would then eliminate five switches besides avoiding a reversing section, if that is what you'd prefer.

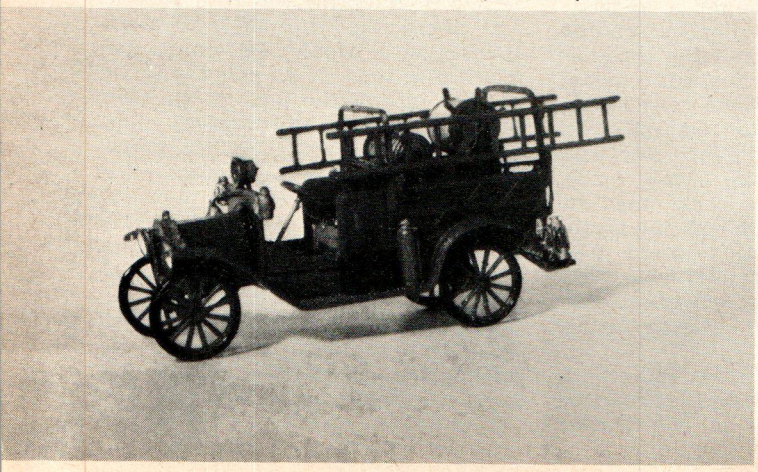
What can you do on the S&D? Any domestic or imported locomotive that will take 18" radius curves, any passenger car that will do the same (shorter ones look better), and any freight car. In narrow gauge, you must use equipment that will take 15" radius curves. Do not be discouraged by advertising minimums

Aerial view shows Donnellan's 1910 Stoneybrook concept. Cobblestone streets are made with styrene sheet appropriately painted. Trees are wire with lichen and tape around the trunk. Old time trolley line out front uses cars of the period. Curb is wood.

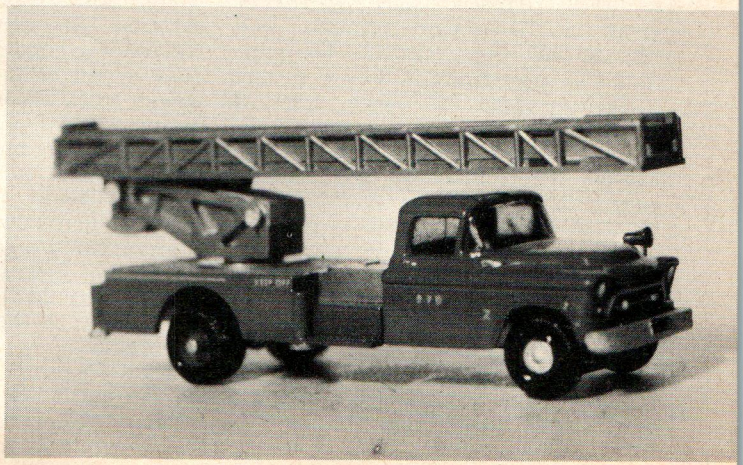
Fire Buffs In Action!

No town is complete without its firehouse and the real fire buff will also want a complete complement of authentic and highly detailed fire engines of different periods out front.

Model T firetruck built from 1915 Model T Ford fire engine kit put out by Jordan Products, P. O. Box 5191, Gross Pointe Farms, Michigan, for $1.50. Tiny model was built by RMC's Steve Ahlstedt who made a few deviations from the kit. All parts are plastic.



Ladder truck is customized Viking model 62n ($1.35) imported by Nathan Preston, P. O. Box 187, Des Plaines, Illinois. Steve Ahlstedt took off the European cab and substituted Chevrolet cab. Other Viking trucks are also suitable for use as fire vehicles.



Fire chasing is a hobby which appeals to many and most model rails undoubtedly appreciate the beauty of modern and old fire fighting equipment. Certainly the fire house is deserving of a spot on the layout.

Dan Donnellan, whose Stoneybrook village recently graced these pages, as did his rapid transit line, has come up with a Stoneybrook fire house to add to his early century city. Dan got his inspiration from the Ramsey, New Jersey firehouse located diagonally across the Erie Railroad tracks from the RMC editorial offices.

The model is a simple boxlike structure of Northeastern clapboard siding (the prototype is yellow brick). Window openings were cut into the wood to fit cast metal Model Hobbies windows. Plastic roof shingle material also came from the hobby shop. The tower bell came from an HO locomotive. Other details were built up.

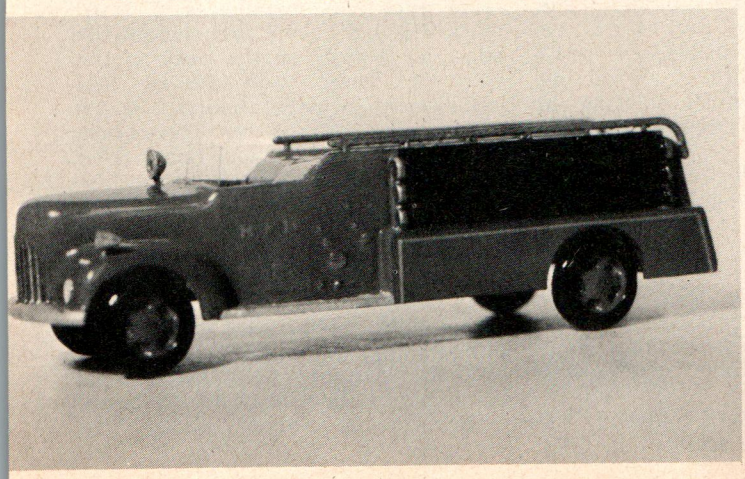
Fire engines in model form are scarce. Vintage wagons are offered by Jordan Models, P. O. Box 5191, Gross Pointe 36, Michigan. The Model T shown in the pictures is a plastic kit retailing at $1.50. A 1910 roadster is used as the Chief's car, also by Jordan and lists at $1.00. These kits are readily customized.

More modern fire engines are offered by Viking Models through Nathan Preston & Co., P. O. Box 187, Des Plaines, Illinois. Preston has a ladder truck at $1.35 and a pumper at $1.25. Both are assembled. While most modelers will use these vehicles as is, they are of European design. However the plastic construction makes it easy to customize both these vehicles and substitute U. S. design cabs. Another fire engine is offered in the Renwal House A'Fire kit but is not offered separately. All of the engines look better when repainted and given prototypical lettering. They also look better when embellished with lost wax detail parts. An ancient 1890 vintage pumper kit is also available in HO from Rollins House Miniatures.

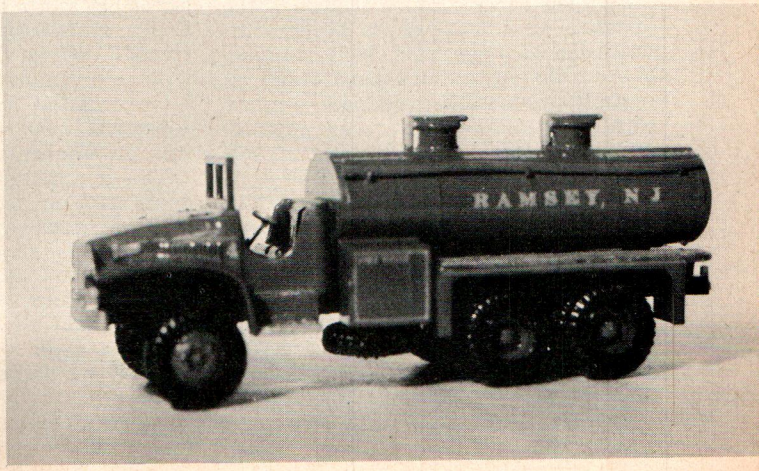
Stoneybrook Fire Dept. was built by Dan Donnellan and was patterned after the fire house at Ramsey, New Jersey, located just a few hundred feet from the RMC editorial offices. It has been modified.

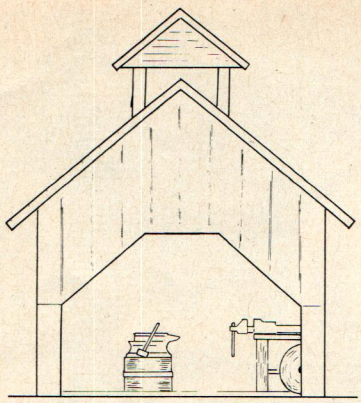
Rear view of the Stoneybrook firehouse. Windows are cast Model Hobbies type. Donnellan uses commercial parts to speed construction wherever practicable. Long johns flying in breeze are from Weston. Bell in tower is from HO locomotive. Trees look natural.

Modern ladder truck comes with Renwal's House A'Fire kit.



Tank truck converted from Associated Hobby Manufacturers GI 6x6

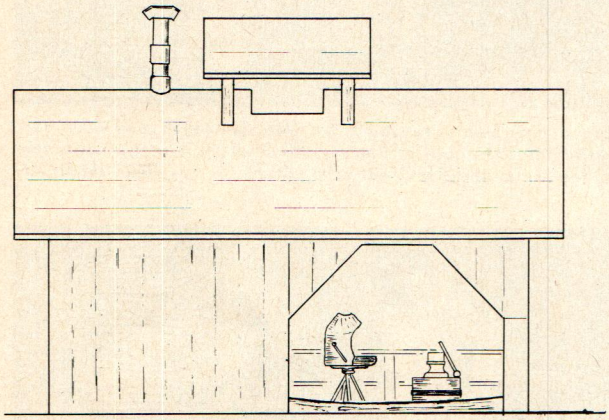




YARD BLACKSMITH SHOP

by E. L. Moore

When the author spotted this oldtime blacksmith shop still in use on the Norfolk Southern, he rustled his bones and came up with a dandy little model that clearly shows the interior.



I RUBBED my eyes in disbelief and looked again as I stood before the little structure in the Norfolk Southern yards. Time seemed to have jumped backward, lopping off half a century at a whack. Here was a yard blacksmith shop that looked almost primitive in this day of power tools. A dismantled grindstone wheel leaned against the end of the workbench by the open doorway. A large vise was bolted to the bench. Near the center of the shop was an anvil on a block, a metal forge, and a rusty stove. Over in a corner were a couple of car jacks and a maul. Spare parts were stored on a lower shelf of the workbench. I felt as though I'd found a gold mine.

I'd seen the structure from a little distance as I stopped to watch the shunting of some cars, so I stepped over to the little brick yard office to request permission to inspect it more closely. "Go ahead," I was advised after explaining why I wanted to see it, "you can have the building too, if you want it." A right liberal offer, but since I was afoot, I graciously declined.

After making a sketch of it I returned to the office for more information. Nobody seemed to recall just when it had been built but one trainman volunteered the information that its present covering (scraps of sheetmetal) had come off a structure which had been torn down some years ago. "Yes," a yardman said, "they still occasionally use the shop when some minor repairs had to be made on the spot." I wondered, since there were no doors, why, in the light of so much present day vandalism and stealing, that it wasn't stripped. "Hell, man," said a clerk, "after these trainmen get through taking what they want there isn't much of anything left worth stealing."

I've modeled it just as I found it except that instead of flat tin covering I used some scraps of capped Northeastern siding, 1/16", with 1/8" spacing, V-ing the caps with a chisel so as to simulate crimped metal sheet siding. On three sides, that is . . . I ran short and used for one wall some 1/16" Northeastern corrugated (wood) siding. I painted the walls with aluminum paint, then mixing some thinned brownish coloring to represent rust and age, I smeared this on unevenly.

This is a modeler's dream—no windows and no doors—just two mouse holes of doorways to cut. A couple of evenings should see it finished, detailing and all . . . I think. Me, I work an hour or so, then prop my feet up and read awhile, or maybe go for a walk, so I have no conception of the actual time I spend at a project.

No need of a bill of materials for this little gem since almost any little scraps will do. So let's begin. Cut two sides, each 8'x20' and two ends each 12' wide by 8' at the eaves and 13' at the peak. From one end and one side cut a doorway as shown in the drawings. I beveled the ends of each piece on a sanding board, making mitered corners. If you prefer plain corners, cut the sides 8'x19' and fit them inside the ends.

Although the shop had a dirt floor, a wood floor is a necessity in our model if the interior is to be detailed. I used a thin floor of 1/32" sheet balsa, first adding some 6" x 12" strips (1/16" x 1/8" in HO) around the inside of three walls, just 1/32" up from the bottoms. This left a good overhang to which the floor could be cemented flush with the bottom. Notice that the doorway on the side has a sill extending across the bottom, worn down in the middle by countless footsteps and heavy objects drawn across it. Make this 9" x 9" or 12" x 12" and thin down the middle of it. I painted the floor brown to simulate dirt, and stained the walls a murky gray.

The roof is removable, made of two pieces of 1/16" balsa, each 13½' x 23', beveled at the top and cemented. Once the cement has set, turn it over and add two triangular braces of 1/8" balsa the shape of the end gables. Correctly placed they give the roof a snug fit. I cut a hole in the center of the roof, 2' x 3' and then made the cupola of balsa to fit over it. To make the cupola roof the same pitch, cut two pieces of 1/16" balsa 3¾' x 7', bevel and cement the edges as it rests on the peak of the shop roof. Then attach ends and legs and cement in place. Behind it is the smokejack for the stove. The cupola carries off the smoke and fumes from the forge which should be set directly beneath it. I painted the legs and ends of the cupola brown, but instead of squares of rusty metal on the roof I used roll roofing. Mix railroad paint to a dark gray, give the roof a thick coating then squirt some powdered graphite on and mess it around. When dry paint the roofing paper lines with a bit of darker paint.

Now for the interior fittings. The workbench is 2½' wide by 10' long

The author's model is completely detailed inside, using castings by Rollins House and Model Engineering Works and others. These castings are essential, as are the drums, pickaxe, and other scrap parts scattered around the building. Don't forget workmen.

and 2½' high. I fashioned the bench vise from a strip of solder using small files. Being unable to find my Weston anvil I fashioned one from some lead, using small files, then glued it to a sawed-off tree trunk with Pliobond. The grindstone wheel which was so conspicuous, had to be there, so I sawed off a thin slice of chalk and sanded it even thinner then grayed it with diluted paint. The forge, should you wish to reproduce it . . . well, you all know what a barbecue grill looks like . . . y'know, every modeler should have an old Sears or Ward catalog—handiest thing ever for such information. To make my forge I took four pieces of soft brass wire, each about an inch long, then wrapped a fifth piece around the center of these and soldered it. Then I spread the legs, nipped them off at the proper length, curled the top wires, or rather flattened them to take the hearth pan which I made from a bit of 1/16" balsa about 2' x 2½', fastening it to the legs with Pliobond, the hood is made of paper. Don't ask me how—I just fussed till I got it and then cemented it to the hearth pan. Paint it a brownish rust color and you've got it.

So there's your blacksmith shop, still in service in 1965, but even more in keeping should your pike date back to the beginning of the century.

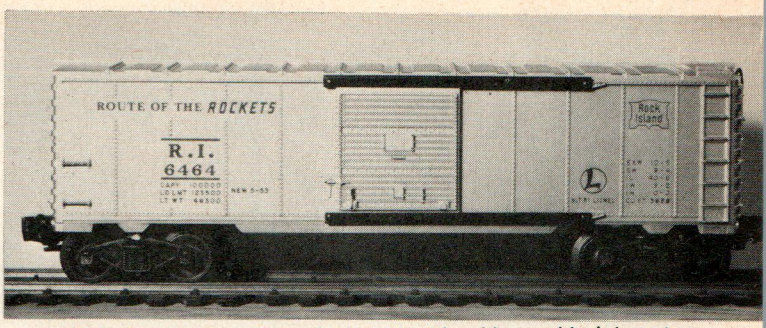
N S Eng. 2 low profile GP-18

Staff Photos. 6464 series cars from the collection of Joseph Ranker.

THE COMPLETE 6464 SERIES BOXCARS

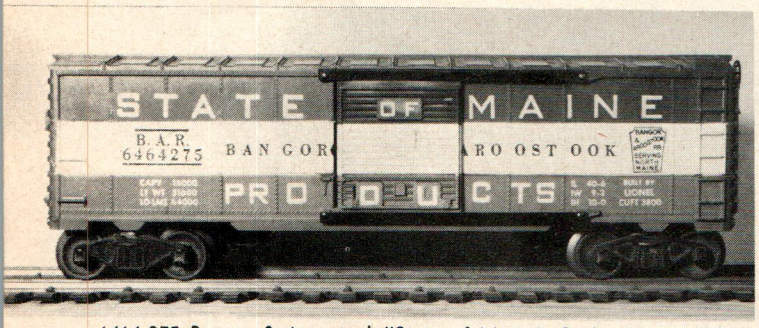
Here's the second group of 6464 boxcars, now eagerly sought by collectors. Brilliant colors, numerous variations, plus the relative scarcity of each type make them highly desirable.

Part 2

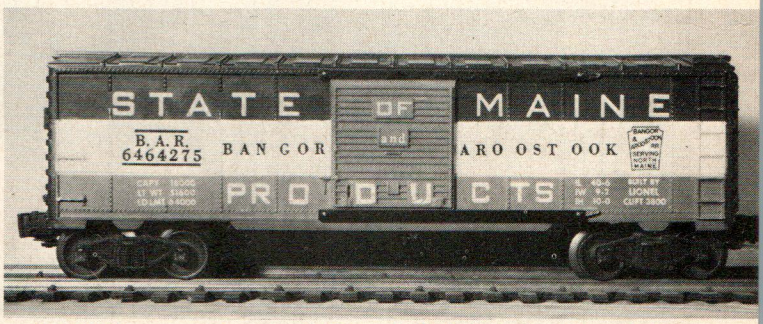


6464-175 Rock Island. Silver body with either blue or black lettering. Dates 1954, 1955. The number 175 does not appear on car.

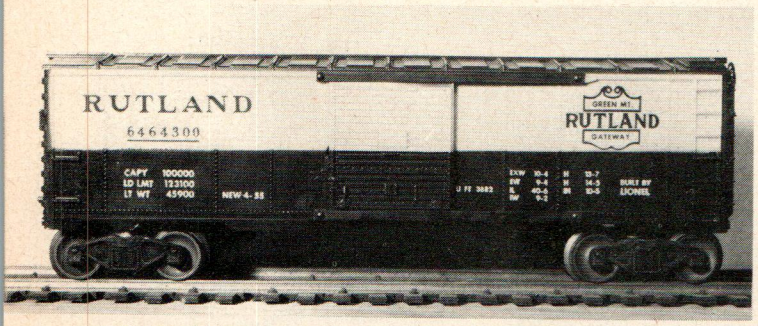
6464-200 Pennsylvania. Tuscan with white lettering. 1954, 1955. The number 200 does not appear on the car; only on the car box.



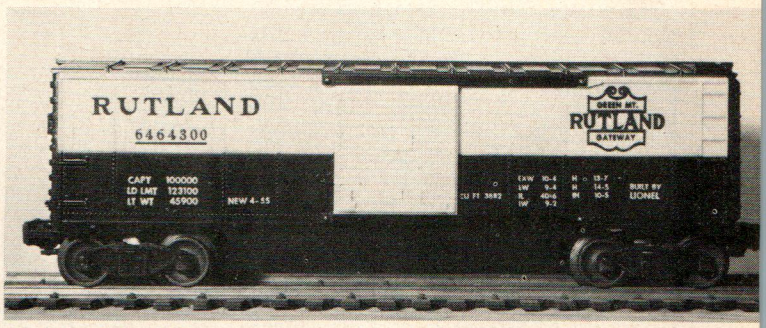
6464-275 Bangor & Aroostock "State of Maine". Red, white, and blue with matching door. New in 1955, also 1957, 1959. Style A.



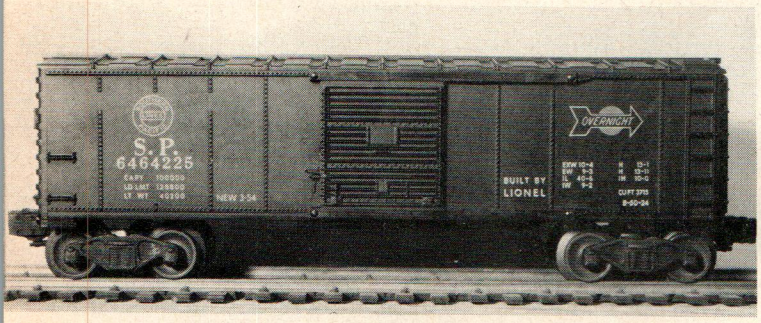
6464-275 Bangor & Aroostock "State of Maine". Red, white, and blue with solid red door with white lettering. Style B.



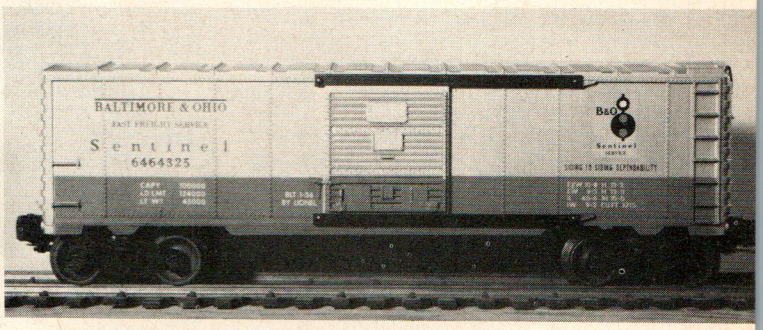
6464-300 Rutland. Green and yellow with matching green and yellow door. Green roof. Style A. Rutland car, 1956 new.



6464-300 Rutland. Green and yellow with bright yellow matching door. Green roof. Style B.

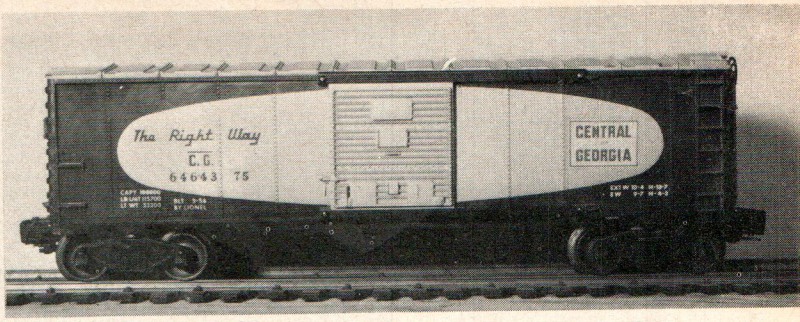


6464-225 Southern Pacific "Overnight". Black car with white letters and yellow herald with orange. Black door. New 1954, also 1956.

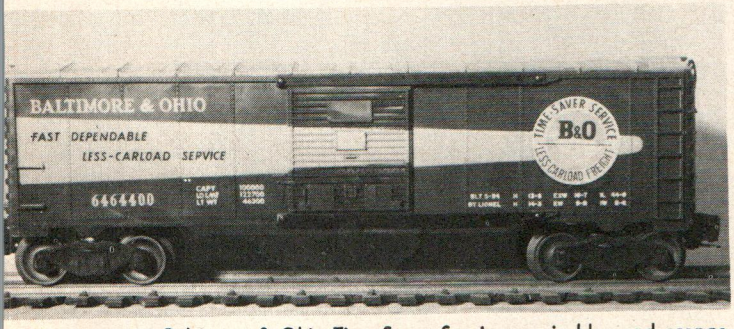


New in 1956, the Baltimore & Ohio Sentinal boxcar, 6464-325, was a brilliant silver and blue with matching two-color door; herald.

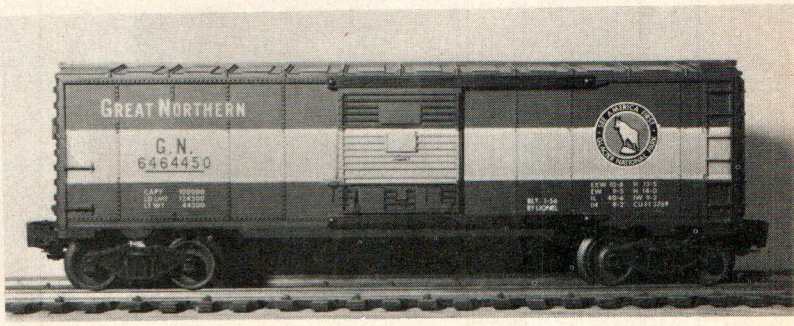
6464-350 had unusual wine color with white MKT-Katy lettering. Car was introduced in 1956 but was not cataloged in 1957 line.



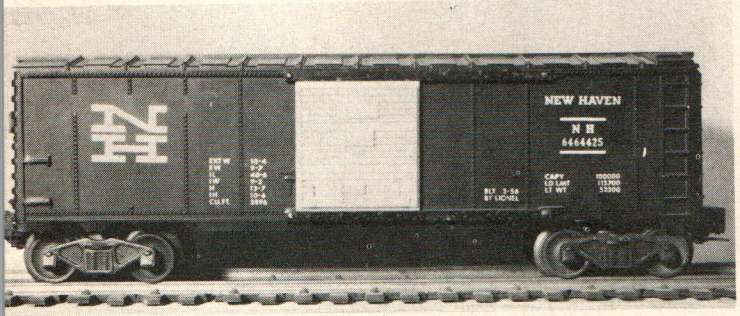
6464-375 Central of Georgia was attractive with its giant silver oval on a maroon colored body. Door and roof were silver. '56-'57.



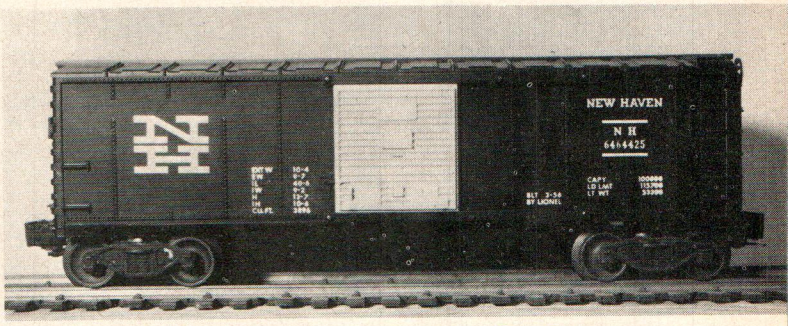
6464-400 Baltimore & Ohio Time-Saver Service car in blue and orange with design continuing through door. Cataloged two years: '56-'57.



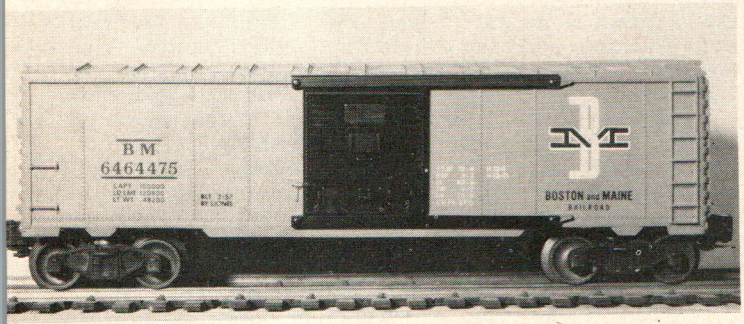
6464-450 Great Northern is attractive olive green with orange stripe extending through door. 1956, 1957. GN goat herald is a decal.



6464-425 New Haven black with orange lettering, Type A, has orange door and complete serif on inside of large N of herald. '56-'58.

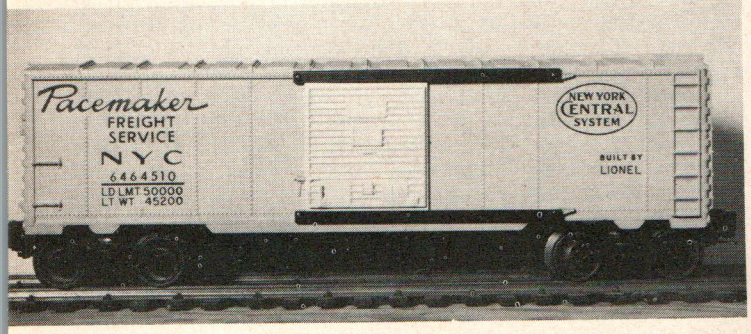


6464-425 New Haven black with orange lettering, Type B has orange door and missing serif on inside of large N of herald.

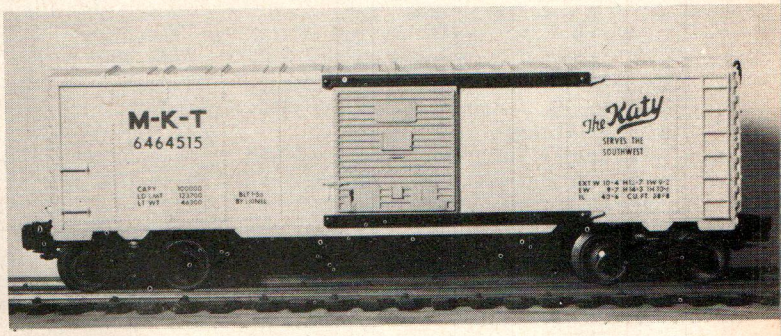


6464-475 Boston & Maine car is blue with black door and black and white lettering. Introduced in 1957, car was cataloged through '59.

6464-500 Timken Roller Bearing Freight was bright yellow with white stripe. Introduced in 1957, offered again in 1958 catalog.



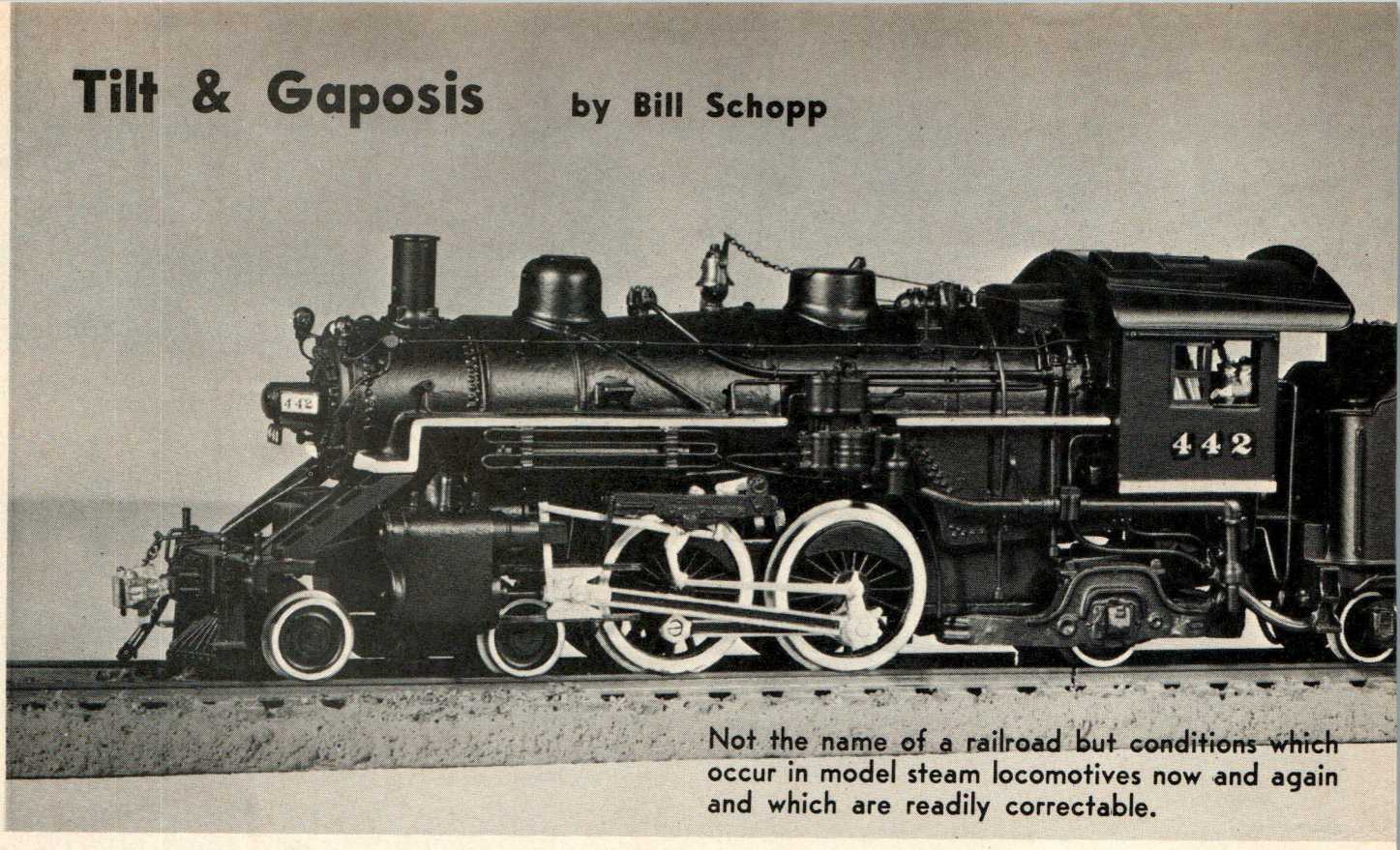
6464-510 New York Central Pacemaker car had pastel blue color with pale yellow door, black lettering. Used in girl's set, 1957-1958.



6464-515 MKT was pastel yellow with light blue door and brown lettering, also used in 1957-1958 special girl train set.

Tilt & Gaposis

by Bill Schopp



Not the name of a railroad but conditions which occur in model steam locomotives now and again and which are readily correctable.

Beautifully detailed All-Nation Atlantic of the Sunset Valley Lines is well built with no marring boiler tilt or excessive air under boiler. Tilts and gaps can be remedied by modeler in most cases.

AT TIMES you will run across a steam locomotive that has one of the problems cited in the title. Tilt is just that, perhaps to one side, but more often fore and aft, as in fig. 1 where the tilt is exaggerated. "Gaposis" was a word coined by advertising writers some years ago to drop hints to the ladies that they should use zippers rather than snaps on their dress plackets to avoid having them gap open. It has been adopted by more than a few model rails to indicate an engine or tender that sits so high that excessive daylight is visible between boiler and drivers, or between tender and trucks.

Primarily I am talking about imported brass engines or ones you cross-kit or make yourself, since all the American made engines have been on the market in one form or another for long enough for tendencies toward tilt or gaposis to have been corrected.

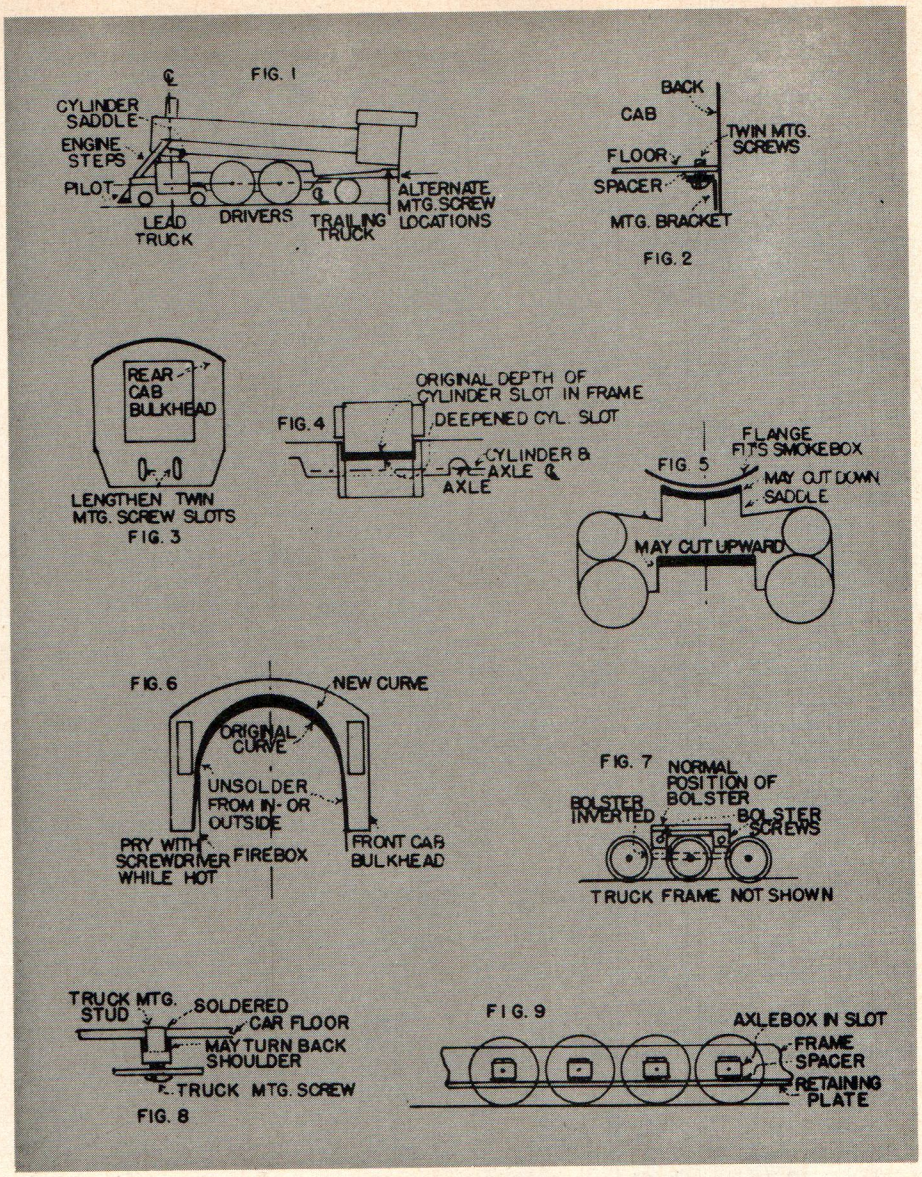
The down-at-the-heels tilt as per fig. 1 comes first. Be sure that it is not caused by a downward kink in the frame or frame extension above the trailing truck. This can usually be repaired by removing motor and trailing truck, and pressing the kink straight. If your trailing truck rubs the firebox edge, this is probably what is wrong.

Of course real tilts are not as bad as drawn, but are imperceptible until you really study what is wrong with the appearance of the engine, particularly in how it lines up with the top of the tender. You probably will find it easiest to level off the superstructure by raising the back thereof. It is probably attached to the frame by two mounting screws, either up into the bottom of the cab (or a bracket soldered to the bottom of the cab) into slots in the lower extension of the rear cab bulkhead. In HO these screws are almost always 1.4 mm. diameter, but if one gets lost an 0-80 screw makes a good replacement, even though threads are not exactly the same. You can insert washers between the cab floor and bracket as in fig. 2 if the first situation holds good. If you don't have the right washers, take a piece of brass or fibre and drill holes to clear the screws. The washers do not have to be round. If, after the screws are inserted you find the boiler is level, then try cementing or soldering the washers to either the bracket or the cab floor. Where the mounting screws are in slots at the rear of cab, simply cut or file the slots longer to allow the cab to move up higher (or lower, perhaps). These slots could really be cut through to the outside bottom.

You may prefer to lower the front of the loco rather than raise the rear. There are several ways of doing this, somewhat more troublesome. You can cut the slot in the frame, in which the cylinder sits deeper, as per fig. 4. Since this slot will have a floor soldered in, that must be unsoldered first and then resoldered in the lower position. You may also cut upward into the bottom of the cylinder saddle (see fig. 5) or, after unsoldering and laying aside the flange for replacement, downward into the saddle. Such cutting on brass is best done with a jeweler's saw; a must for a fellow who is going to fool around with cross-kitting or doctoring brass engines. A #2/0 blade is best for cutting HO sizes of sheet brass.

I must point out quite frankly that lowering the front of an engine as above may let you in for a lot of troubles. You see, the center-line of the driver axles should conicide with the center line of the cylinders. This is shown in figs. 1 and 4. (The vertical center line of the cylinders should conicide with the stack on nonarticulated American steam power, too.) You can fudge a little, not more than 1/32" or maybe 1/16" in how much these horizontal center lines coincide, but very much discrepancy will be as noticeable or worse than the original tilt (fig. 1) you are trying to correct. You also will have the engine steps (fig. 1) pushing too hard against the running board or the pilot beam. You'll probably have to remove the engine steps, cut off a little from their sides, and replace. If they are built up rather than cast, you will have a sweet time if they become unsoldered: hence, just tack-solder them in place. Sometimes these are soldered to the pilot beam, sometimes to the running board. (One O gauge engine I worked on recently had 'em attached at both ends with screws and just lucky I spotted the screws!)

If you do not cut down the height of the engine steps in such a lowered front end, your pilot may be forced down and rub the track. In this in-



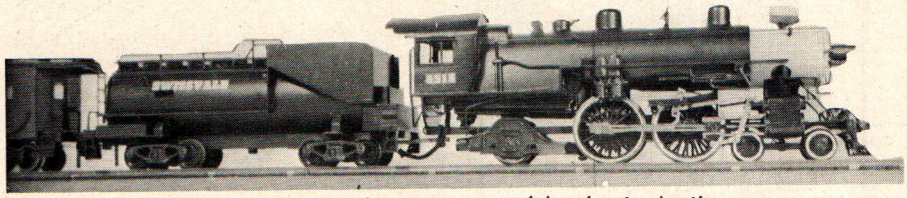
stance, you will have to jeweler's saw enough off the bottom of the pilot to clear the rails. (Or unsolder it and raise it, a tougher job.)

A forced or bent-down pilot may rub the pilot wheel on the left side causing a short-circuit from time to time. The sparks are easily spotted by running the loco in the dark. Hence you may need to install smaller pilot truck wheels. This may also be the case if you decide to lower the cylinders per figs. 4 or 5. Alternately you may be able to lengthen the pilot truck.

If you wish to raise rather than lower the front of the boiler, you may insert a washer or spacer under the cylinder block or curve a duplicate of the cylinder saddle flange and put it against the smokebox.

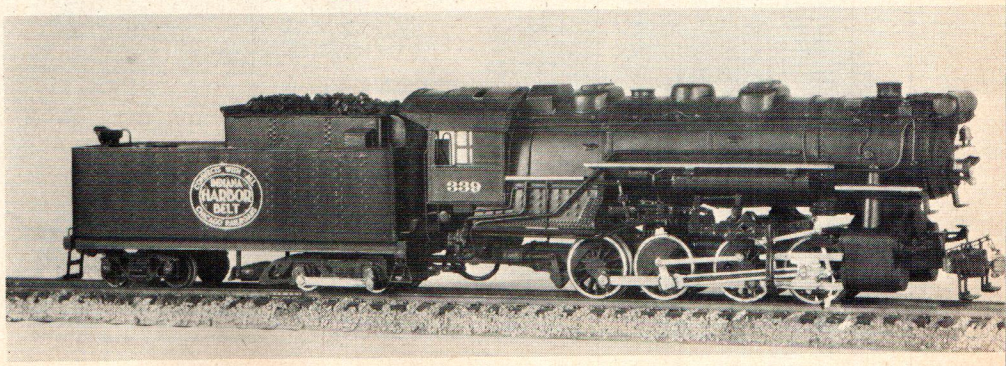
An engine that is tilted to one side should be studied carefully from each end. Sometimes loosening the mounting screws and adjusting the tilt out before tightening the screws will fix it. If the pilot beam is parallel to the rail-heads, and the running boards are parallel to the pilot beam, perhaps your cab is canted. Sometimes this can be twisted aright by hand, but you may have to follow the correction described in fig. 6. Sometimes a boiler may appear to be tilted sideways when only the boiler front has become slightly twisted. This can be adjusted by hand, or by prying out the boiler front and inserting it correctly.

One collector bought a hundred dollar locomotive and after checking it against plans and photos decided to return it even though it was a beautiful job — the cab was too high! This is not too easy to fix but it can be done, per fig 6. You have to unsolder



Swissvale scratchbuilt HO model by veteran modeler Lewis Austin has somewhat more air under boiler than is acceptable today due to many fine lost wax castings now offered in HO and O. But 20 or 25 years ago such details were unknown and a model such as this was the acme of perfection. Still is, with a few extra parts.

Gorgeously handcrafted IHB 0-8-0 displays some air under her boiler, about as much as would be found on the prototype. As locomotives got bigger, air under the boiler became less and less. "O" model.



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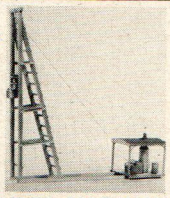
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the cab from the firebox, cut a new curve in its front bulkhead to allow it to sit lower, and resolder in place. Not so fast there, Bill. . . . Before attempting to unsolder the cab, you must remove from it any walkways under the cab sides, and steps up to running board ahead of the cab. Be sure hand-rails and pipes, which run into front of cab are not soldered, And of course remove it from its mounting bracket underneath, if any.

You unsolder the cab. I use the carbon electrode soldering tweezers, pressing them either inside the firebox where the front bulkhead abuts, or outside, on the firebox just ahead of the cab. As you heat one side, gently pry the firebox away from the cab with a screwdriver and let it cool. Then do the other side the same way. You may have to work around to the top, but chances are that it will be hot enough that if you have leather gloves, you can simply bend it off, pulling the solder apart. In putting the cab back, you use a soldering gun and tack a place at one lower edge, check for squareness, then the other, completing the soldering job with either gun or tweezers. Beware: some cabs have tabs which interlock into slots in the firebox.

Lowering a whole superstructure by reducing height of rear mounting bracket or lengthening the slots (the reverse of figs. 2 and 3) and by lowering the cylinders (as figs. 4 and 5) may cause interference by the dummy driver springs with the boiler, but this should be checked before you do it. Lowering a boiler is a good way to eliminate gaposis on a locomotive, although one other consideration is whether the motor will need also to be lowered or filed round at its back, rear, top. If you have prototype plans and a scale ruler or calipers you should try to make over-all height correct. As a rule of thumb, this is around 15'2" for eastern road steam engines, and 16'0" for western roads.

Tender gaposis is often more noticeable than on locomotives. One way of fixing this, where you have six wheel trucks, is shown in fig. 7. You simply take out the four bolster screws that hold on the side frames, and invert the bolster. This lowers the tender so much that spacer washers will be needed to keep it from being too low. Often parts of the tender underframe will need to be removed to give clearance. Be sure that the wheels do not rub the underside of the tender or any of its members, and that the side frames do not rub any part of the tender.

Another way of eliminating tender gaposis (shown in fig. 8) requires the use of a lathe to cut back the shoulder on the two tender truck mounting studs, and resoldering them deeper into the floor, level of course so trucks are not tilted. This may lower the wireless drawbar so much that it will not stay coupled to the engine, or, alternately, the pin will not stay in the hole in the drawbar on engine. In this instance the wireless drawbar may be given a jog upwards, bending with two pair of long-nose pliers.

If the whole locomotive is too high, you can lower it about 1/32" as per fig. 9. All you do is insert spacer strips 1/32" (or whatever) thick under the axleboxes, forcing them up higher into the frame, assuming that it is sprung. This then lowers the frame and the whole locomotive. Actually the spacers should be soldered to the top of the retainer plate.

To be sure, your engine should be 100% true to protoype in all possible dimensions, and these difficulties of tilt and gaposis should not be. But unless you do all the building yourself and are extremely particular and have just the right tools and equipment, let's face it, it'll depart from 100% quite a bit. If you are cross-kitting, switching parts around between two engines with additional lost wax castings, you must make compromises which may make one acquainted with the prototype. Luckily, in a way, prototype steamers are no longer around. And even those that have been preserved represent only one of a group. Steam locos went through the shops from time to time and both major and minor details were changed: tender, trucks, booster, cab, driver size and type, valve gear, piping, etc.

If you can get hold of a 1½" scale erection drawing and a group of photos, you'll really be surprised if you take calipers and check even the highest priced hand-made model. There are always numerous deviations you can find if you try hard enough, disregarding the way frames and running gear have been conventionalized. A few fellows cause themselves a lot of worry by insisting on a trueness to prototype that can often not be substantiated and may, indeed, exist only in the faltering videoscope of nostalgia. Many good modelers who are particular, but who can make changes desired, soon come to accept certain discrepancies as long as they do not spoil the over-all effect.

If you have any similar problems to solve, or have solved any, I'd like to hear from you.

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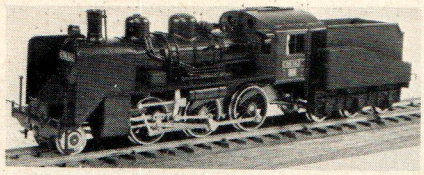
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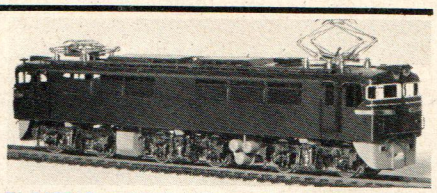
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EXCHANGE: Hobbyline Fairbanks Morse, Mantua Sharknose "A". Tenshodo GN 2-8-2, 0-6-0, Varney brass Berkshire in metal box, Hobbytown Alco, 4-6-0 Camelback, many others. SAE for list. FOR: SP locos Max Gray MT-3 - 4-8-2. Robert L. Sherlock, 3144 W. San Miguel, Phoenix, Ariz. 85017.

EXCHANGE: Lionel #390E, #10 locos, Lionel & Ives frt., pass. cars, track, bridge. Very good cond. FOR: Lobaugh U.P. Challenger, repairable cond. (or better) or On3 K-27 Mike. SAE for list. Ron Morse, 893 Linda Vista, Banning, Calif. 92220.

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EXCHANGE: Lionel, A.F., HO Trolley equip. SAE for list. FOR: HO Brass locos. H. Conklin, 2018 N. Highland Ave., Apt. 10, Hollywood, Calif. 90028.

WANT: PFM N&W Aux. Tender-Cat. Price for unused unit. Hobbytown #1312 Alco Rd. Switcher 12-wh. dr. kit less mtr. & wht-need 2. Instruction sheet for Devore Dynamometer Car-To Be Xeroxed & returned. William T. Elville, 1245 Legion Ave., Napa, Calif. 94558.

EXCHANGE: Ives, Lionel, Amer. Flyer, Cat. RMC, MR, Trains, Model Trains, mag., Lionel advanced cat. FOR: What are your needs? E. P. Hostetler, 4444 Anderson Ave., Oakland, Calif. 94619.

WANT: Walthers Shuttle Jack. EXCHANGE: New Haven Class EP-3 in HO Brass by MEW. FOR: United NYC Mohawk or LMB—H10B NYC Mikado in same cond. George Copeland, 821 N. Grove, Ontario, Calif.

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THE OPERATORS

(Continued from page 31)

include any better solutions in a future column so that we may all benefit.

Bob Nock of Reading, Pennsylvania whose father works for a railroad suggests that in our model railroads our blocking of trains need not be restricted to actual switching requirements. Bob points out that both the railroads themselves as well as the I.C.C. have certain rules governing the placement of cars in a train, which must be followed. In general these rules are based upon safety to both crew and public. Bob has culled through these rules and come up with a list which he uses as general rules governing the operation of his road.

RULES GOVERNING THE HANDLING, BLOCKING, AND PLACEMENT OF CARS

1. Safety is everybody's business.

2. Before moving cars crews must make certain that all drafts, (strings or cuts of cars), are properly coupled by 'stretching' cars, (slowly taking up the slack), to be certain that all couplings have been properly made.

—This is an ideal rule for use in model railroad operation and you'll find that most will insist upon a visual check of all couplings before the train leaves a station. Many call this inspection an air brake check and do it because incorrect or false couplings often cause derailments.—

3. Cars placed on sidings or spurs must not obstruct crossings. Whenever cars are placed in yards or on other tracks, they must be placed so as to provide sufficient clearance to avoid damage.

—This rule includes making certain that cars are clear of switch fouling points and proper wheel blocking is supplied at points where the track is on a grade. Individual ties can be used on the model railroad for blocking wheels though your crews will have to be alert in order to prevent derailments when at a later time they couple up with such cars. On my own A. & L.P. our crews in their desire to get on with the job often overlooked these blocking ties so we now use colored glass headed pins which are easily visible from the operating positions.—

4. List of placards for loaded cars prescribed by the I.C.C.

a. Explosives.
b. Poison Gas.
c. Dangerous.
d. Dangerous—Class 0 Poison.
e. Caution—Residual Phosphous.
f. Dangerous—Empty.
g. Dangerous—Fumigated.

Cars so placarded must have the placards attached to the placard boards on each side of the car.

—The decal makers, Champ and Walthers both have several of these special placard type of decals available so that certain cars can be specially designated to require special handling.—

5. Precautions to be taken in switching cars placarded "Explosives" or "Poison Gas".

a. Cars shall not be cut off while in motion.
b. *NO* car moving under its own momentum shall be allowed to strike a car placarded "Explosives" or "Poison Gas".
c. *NO* car placarded "Explosives" or "Poison Gas" shall be coupled into with more force than is necessary to complete the coupling.

6. In a freight or mixed train any car placarded "Explosives" or "Poison Gas" shall not be handled next to:

a. An occupied passenger or combination car other than one occupied by gas handling or military personnel accompanying the shipment.
b. Any car placarded "Dangerous" or "Dangerous Class 0 Poison".
c. An engine.
d. Any placarded tank car.
e. Any wooden underframe car, except narrow gauge.
f. Any loaded flat car.
g. Any open top car, (gondola, hopper, etc.), when lading extends beyond the sides or ends thereof.
h. Any cars equipped with automatic refrigeration or any apparatus utilizing an open flame or internal combustion engine.
i. Any car loaded with live animals or fowl.
j. Any occupied caboose.

7. *NO* car placarded "Explosives" or a placarded tank car may be placed closer than two cars from an engine or occupied caboose.

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8. It is permissible to operate a train consisting entirely of placarded tank cars.

9. When in a yard, terminal, sidetrack or siding a car placarded "Explosives" must be separated from the engine by at least one (1) non-placarded car.

10. A car placarded "Explosives" shall not be placed next to a passenger station or shed except for the purpose of loading or unloading, nor shall it be placed under a bridge or under a highway crossing.

11. Wood underframe cars must be handled as the last car of a train and in the use of a pusher engine it must be cut in behind said pusher engine.

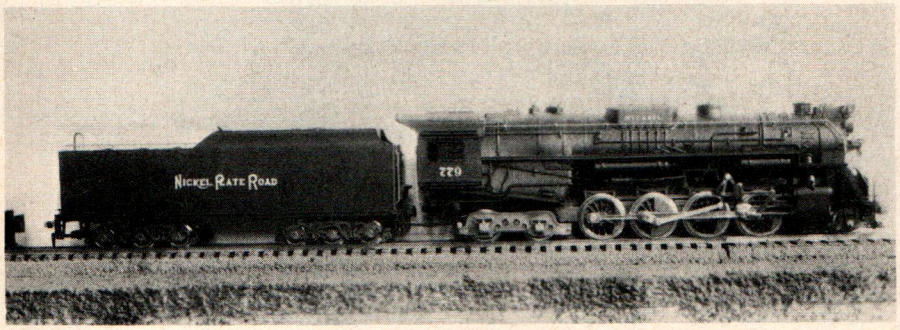
— Most of us have seen this rule in operation when we have observed pusher engines cut in ahead of the caboose on trains. Often times the older cabooses are equipped with wooden underframes which just won't take the shock of pusher service. An the A & L.P. all wooden sided cabooses are considered to have wooden underframes and we observe this rule faithfully, both in pusher service as well as in switching cars. In switching from the rear of a train local rule dictates that the caboose must be pulled and set aside before the local switcher can break down the train. —

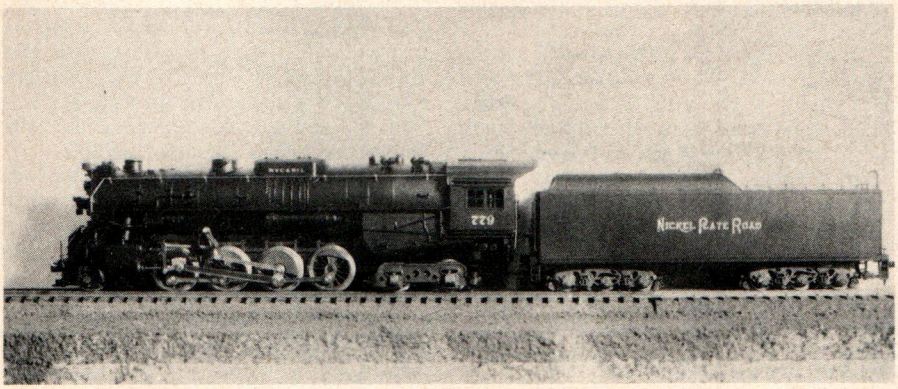
Bob concludes his list of rules with the notation that Rules 4 through 11 are I.C.C. Regulations and violation of them is punishable by fine or imprisonment.

SOLUTION TO John Allen Switching Problem:

1. Forward—Couple to A' A.
2. Back Clear of Siding.
3. Forward—Uncouple A' A or siding.
4. Back out.
5. Forward—Couple to B' B.
6. Continue forward to clear main switch—Uncouple B B'.
7. Back train around loop—Couple B B' to caboose.
8. Forward—Uncouple B B' and leave inside loop.
9. Continue forward around loop—Uncouple C and caboose on loop.
10. Continue forward to clear main switch.
11. Back and couple B to B.
12. Forward until clear of siding.
13. Back and couple to A'.
14. Forward.
15. Back and couple to B'.
16. Forward.
17. Back—Leave A' and B' coupled to C and caboose.
18. Forward.
19. Back—Uncouple A B B' on main loop.
20. Forward.
21. Back into siding—Couple to A.
22. Forward.
23. Back—Couple A ot A B B .
24. Continue back—Uncouple B B. at B.
25. Forward—Uncouple A A at A.
26. Continue forward.
27. Back—Couple A' B' C.
28. Forward past main switch.
29. Back—couple C and C'.
30. Forward past main switch.
31. Back—Uncouple C' at caboose.
32. Forward past main switch.
33. Back—Uncouple C C at C.
34. Forward past main switch.
35. Back—Couple to C' and caboose.

TEST TRACK





Nickel Plate Berkshire from Associated Hobby Manufacturers is all plastic beauty, ready to run, from Rivarossi of Italy. Stamped metal frame, working headlight, driver leaf springs (simulated), plus three sizes of counterweights are among the many details.

Cincinnati & Lake Erie Motor: HO
Imported by Ken Kidder, P. O. Box 213, San Francisco, Calif. 94101.

Ken Kidder seems to keep the surprises coming. Last year there was the little steam dummy and then a dandy Key System train. His latest is a high-powered Cincinnati & Lake Erie freight motor with 8-wheel drive. Modeled after the 635-649 series of the C&LE, the model takes advantage of the inherent space available in any box rail car and comes with a big shock mounted Japanese DC permag motor. Power is transmitted to the trucks through a double-end shaft connected to each truck with a flexible coupling and double spring belt drive. In the usual fashion, the car comes wired for 2-rail but can readily be wired for overhead wire operation if desired.

The brass work on this Japanese import is sharp and clean, from the sharply detailed Taylor type truck frames to the built-up roof mats. Rivet detail is excellent.

Our sample car started five standard HO freight cars up a 5% grade

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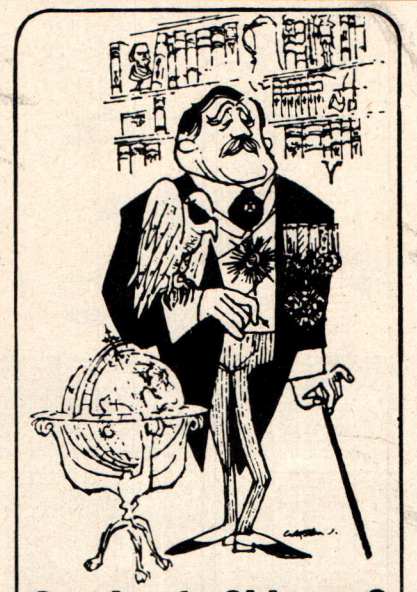

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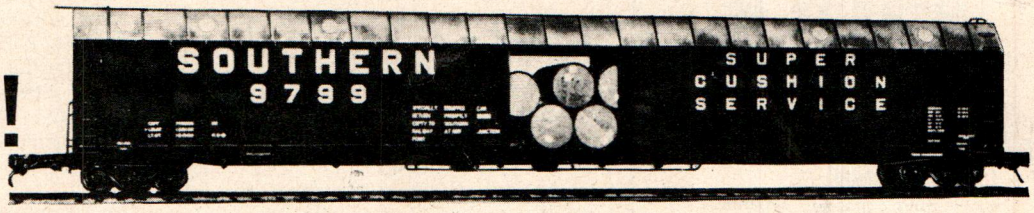

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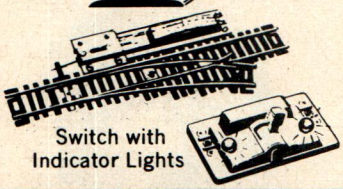

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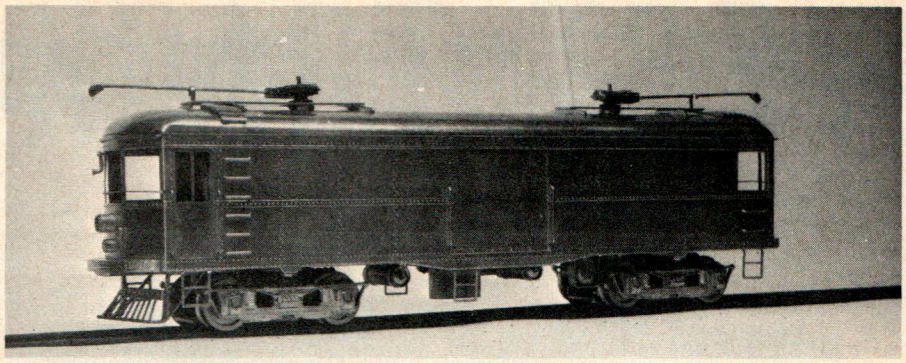


Cincinnati & Lake Erie box motor in Ken Kidder HO import at $34.50 features 8-wheel drive from center hung motor larger than usually found in HO car. Brass body work has beautifully handcrafted detail.

at a very low throttle. With judicious addition of a little more weight, she would probably haul far more than the standard interurban load of six or so freight cars.

The prototype operated with either Taylor or C-80-P truck and was equipped with Van Dorn couplers. The body was painted maroon with tan roof, yellow lettering, and black trim. Decals are available for C&LE. Plans of the car appear in "Traction Planbook" and gives lettering information (Model Craftsman Publishing Corp., P. O. Drawer C, Ramsey, N. J. 07446: $2.00 ppd.). List price of the model, ready to run unpainted, $34.50.

Nickel Plate Berkshire: HO

Imported from Italy by Associated Hobby Manufacturers, Inc., 3214 North Boudinot St., Philadelphia 34, Pa.

A production sample of the new AHM Nickel Plate Berkshire has just arrived here direct from the Rivarossi factory in Como, Italy. If Michaelangelo did a superb job chopping away at marble, his ancestors are doing an equally fine job of producing beautifully detailed HO locomotives.

Associated Hobby Manufacturer's model represents one of the last types of 2-8-4 built for the NKP by Lima Locomotive Works. The model comes ready to run with Nickel Plate Road lettering in yellow. (Also optionally available with Pere Marquette lettering). The drive is similar to that found in the AHM C&O Y-6b (reviewed in Test Track, RMC April '65 p. 60). A Rivarossi DC permag motor mounted in the cab delivers power to a horizontal drive shaft connected with a gear box, plastic with bronze bearings, that in turn deliver power to another worm and gear set that powers the drivers. If this sounds complicated, the noise from the loco as it operates belies the mechanism which is far quieter than most brass jobs.

How about the rest of the locomotive? The superstructure and tender shell and floor are molded plastic, black except for the gray tender floor. All trucks on the locomotive and tender are a very realistic dark grey having an excellent dusty look which still shows all detail clearly.

Tender trucks are 6-wheel Buckeye, unsprung, complete with integrally molded simulated brake shoes. All wheels are nickel silver with insulated plastic inserts. The two end wheels of each truck, left side are equipped with metal pressure discs that transmit the current from the locomotive back to the track.

A wireless drawbar connects loco and tender, two holes being provided. Where the locomotive is to be used on sharp radii, the long drawbar hole should be used.

Locomotive drivers are also metal rimmed. The molded counterweights are of three different sizes as per the prototype. All valve gear parts are nickel silver stampings except for a blackened valve gear hanger and crosshead. Pilot and trailing trucks have springing devices to prevent easy derailment and also aid in centering of the pilot truck.

Locomotive frame is blackened stamped metal atop of which is mounted simulated leaf springs. All piping is molded into the boiler except for the handrails and uncoupling rod mounted on the pilot.

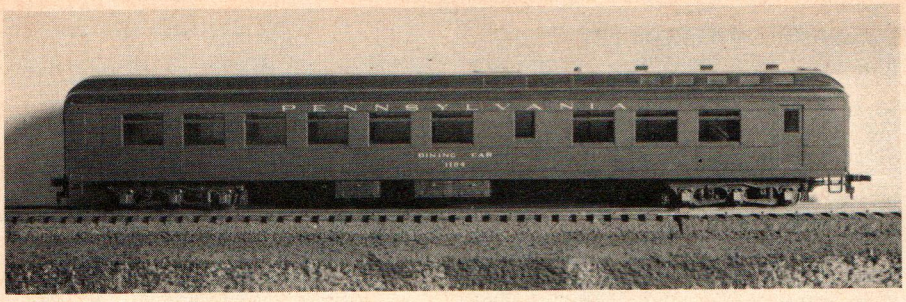
A bulb mounted in the boiler illuminates the two headlights. Lettering on the loco includes the number "779" on the cab and "NYC&STL" on the rectangular sand dome.

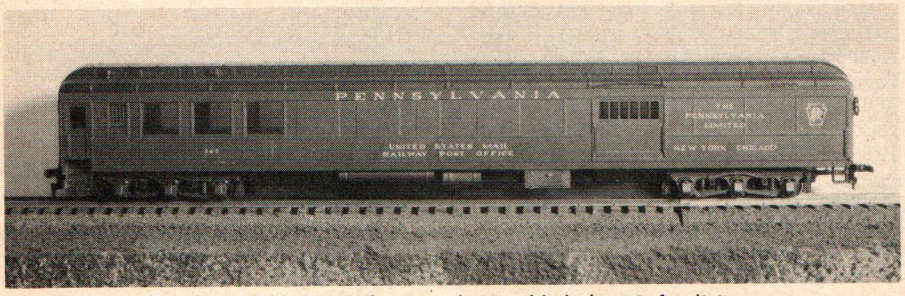
List price of the loco and tender, ready to run painted, is $27.95. The engine performed very smoothly on both 18-inch and 22-inch radius on our test layout, through switches, both forward and reverse. A dummy AAR coupler is mounted on the pilot and an NMRA type horn coupler on the tender. The tender coupler is easily replaced. Flanges are European standard. We expect to see a lot of these locos running on HO pikes in our travels. She's a real beauty.

80 Ft. Dining Car: HO

Imported from Italy by Associated Hobby Manufacturers, Inc., 3214 North Boudinot Street, Philadelphia 34, Pa.

A companion full length 80 ft. dining car has been added to the previous string of standard heavyweight cars offered by Associated Hobby Manufacturers, consisting of a Pull-





Associated Hobby Manufacturers have added this 80 ft. dining car to their "standards" series along with tuscan red Pennsylvania road name in all types. Car takes 18 inch radius curves easily.

man section sleeper, combine, and observation car. As with the others, this car was made at Rivarossi's Como, Italy, plant.

Our sample was ready to run, prepainted tuscan red with black roof and Pennsylvania Railroad lettering. Except for the two service doors to the kitchen, the car has no doors for passenger entrance. Passengers would enter only from the two vestibule end doors. Overall detail is generally similar to the other cars in the series, previously reviewed (RMC Jan. '65, p. 47).

Unusual features worth repeating include the molded-in end gates which would be seen whenever the car is operated at the tail end of a train. Roof detail consists of a number of hatches and vents over the kitchen area only, plus louvered openings in the clerestory portion of the monitor roof, again over the kitchen area. There are no air-conditioning ducts.

Trucks are detailed, all-plastic pieces with NMRA-type horn couplers attached. The coupler swivel permits these cars to negotiate an 18 inch radius easily with the coupler always centered over the track. We have removed the entire coupler assembly from a few of the earlier releases in this series, replacing them with Kadee magnetic MKD type couplers, body mounted. There is a distinct improvement in appearance of the entire car, especially in view of the near-prototypical look of the Kadee. At the same time, the car will no longer take anywhere near a 22 inch curve. We did not attempt to mount Kadee couplers on the truck extension bar holding the horn coupler but no doubt it could be done.

Truck detail is pleasing. Wheels are also molded on steel needle bearing axles and are made to European standards. We ran the cars over our test layout and the cars ran beautifully over both 18 and 22 inch radius, including backing up on 18 inch radius through switches. All rails are standard code 100.

Also tested were the PRR Pullman "James Logan" and the combine lettered for the Pennsylvania Limited. Note that these are the standard series of cars, not the deluxe series due for later release and having complete interior detail.

If the cars suffer from any major omission, it is probably in the lack of diaphragms. Wright MHP diaphragms would probably do the trick, especially where the cars are operated on wide radius track. Diaphragms can cause trouble on very sharp curves.

The diner and the Pennsy lettered cars will be welcome additions to many model pikes. List price, $3.50.

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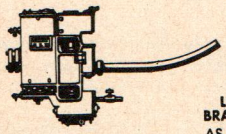
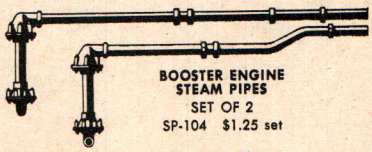
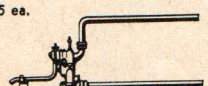
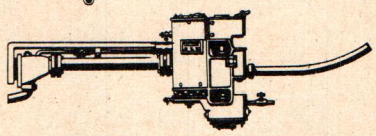
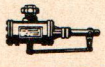
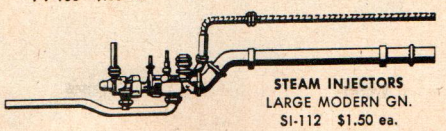
NEW FROM CARY A new line of superb quality HO loco fittings in gleaming brass

FEEDWATER HEATER
WORTHINGTON BL
FW-101 $.95 ea.

LOCOMOTIVE BRAKE CYLINDERS
AS USED ON 4-4-0
BC-116 $1.35 pr.

SANDER VALVES
P.R.R. STYLE
SA-113 $.65 pr.

BOOSTER ENGINE STEAM PIPES
SET OF 2
SP-104 $1.25 set

NON LIFTING INECTORS
P.R.R. TYPE
NI-107 $.85 ea.

FEEDWATER HEATER
PENNSY 11
WORTHINGTON BL
FW-102 $1.50 ea.

POP VALVES & WHISTLE
P.R.R. STYLE
PV-103 $.65 set

POWER REVERSE
ALCO TYPE "T"
PR-110 $.85 ea.

P.R.R. MARKER LIGHTS
SET OF SIX
2 w/brkt. 4 plain
ML-106 · $1.50 set

STEAM INJECTORS
LARGE MODERN GN.
SI-112 $1.50 ea.

STARTER VALVES
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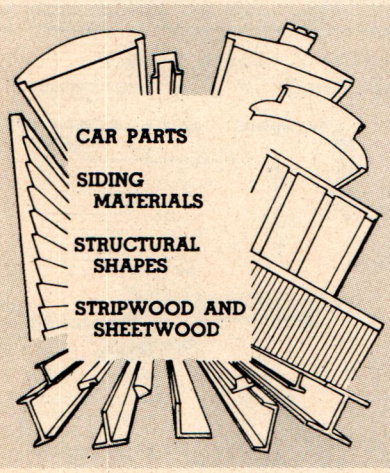

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SCALE MODELS, INC.
BOX 1A BALLARD VALE, MASS.

Locomotive Fittings: HO

Mfd. by and for Cary Locomotive Works, P. O. Box 240, Rte. 2, Cary, Illinois 60013.

Cary has made available a series of lost wax and turned locomotive fittings for use on the Cary steam locomotive boilers and other locomotives.

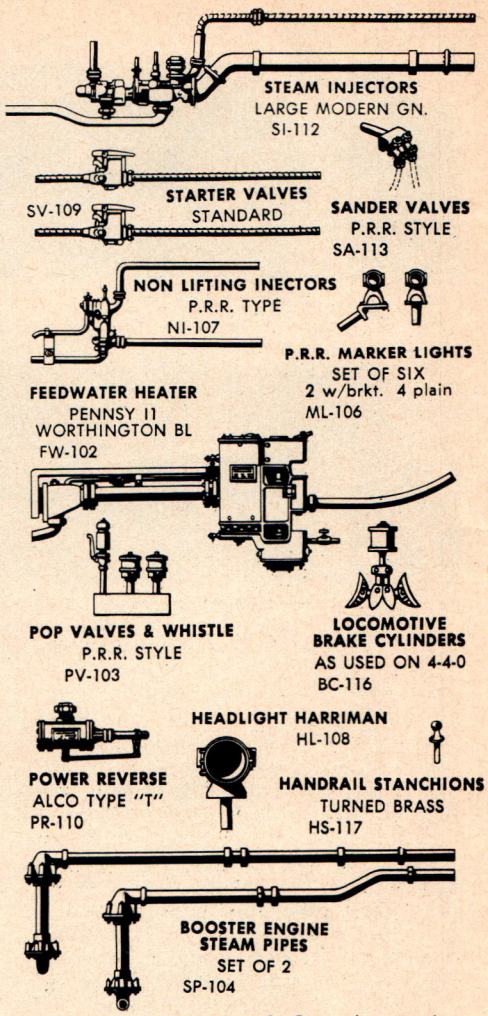
Samples received include the following: FW-102, Feedwater Heater, Wor thington BL, for PRR I-1 Decapod, $1.50; PV-103, Pop Valves and Lifters, for K-2, K-3, and I-1, 65c; SP-104, Booster Engine Steam Pipes for C&NW J-4 Berkshire, $1.25; ML-106, PRR Marker Lights, 2 w/bracket and 4 plain, $1.50; NI-107, PRR Non-Lifting Injectors for I-1, 85c; HL-108, Harriman Headlight, 75c; SV-109, Starter Valves, Standard, $1.25 pr.; PR-110, Power Reverse Alco Type T, 85c; SI-112, Steam Injectors, large modern, $1.50; SA-113 PRR Sander Valves, 65c pr.; RC-116, Locomotive Brake Cylinders as used on 4-4-0, $1.35 pr.; and HS-117 Turned Brass Handrail Stanchions, 55c dozen.

Cary also offers several packages of fittings including Kit 502, a money savings package over individually purchased components for the C&NW Berkshire boiler, $7.75 set. The quality on these parts is generally very good to excellent, and most certainly welcome by the scratch and custom builder.

Colorado Midland Reefer: HO

Mfd. by LaBelle Woodworking Co., P. O. Box 22, Oconomowoc, Wis.

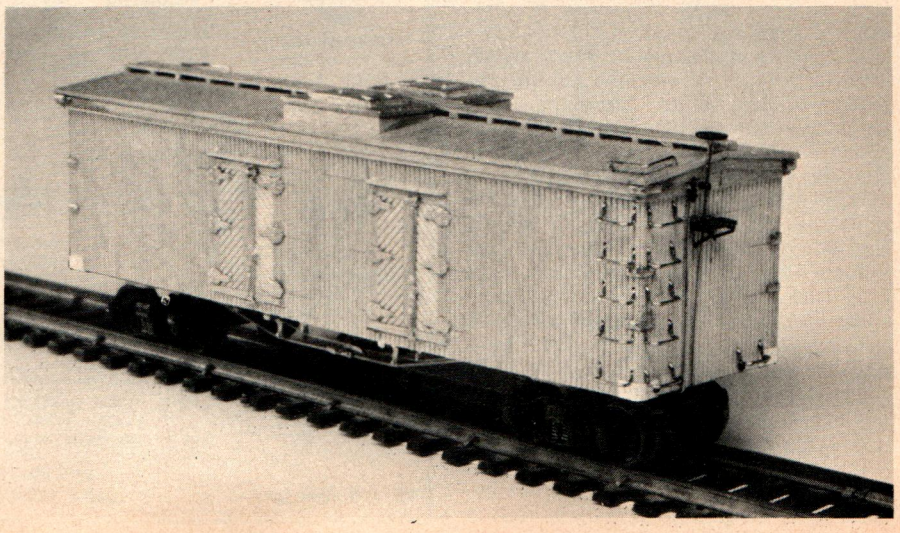
One of the more colorful freight cars to come out of the 19th Century was the Hanrahan Patent reefer, operated by the long abandoned Colorado Midland Railroad. What sets it apart from the usual reefer is the colorful four-color Indian decal for each side of the car (our model is shown unpainted), as well as the unusual center ice bunkers and four side doors.



Actual size drawings of Cary Locomotive Works loco parts in lost wax and turned brass.

Construction follows normal LaBelle construction, with a multitude of close fitting intricate wood parts. Parts are accurately milled and require only reasonable care in trimming of the smaller pieces with a really sharp modelers knife. Sanding is always recommended to eliminate the possibility of fuzz which could

LaBelle Woodworking Co. model of the colorado Midland Hanrahan refrigerator car for fanciers of vintage equipment. Construction shows car completed but not yet painted. Kit is top quality.



mar the beauty of the completed model.

The one tricky part in the construction is in the cutting out of the door openings. We suggest cementing the sides to thin paper and cutting after the cement has set.

No material was furnished for the corner reinforcing plates at the sills. Paper, card, thin brass, or aluminum foil (Reynolds Wrap, for one) are all suitable for this puropse.

The only parts which we felt weren't up to normal LaBelle quality on this model were the turnbuckles for the truss rods. Critical modelers may want to check out their model railroad shop dealer for better ones when they buy the kit.

Another similar kit for an Illinois Central box car is covered in the same instruction sheet. Aside from differences resulting from being a boxcar, construction is generally identical and most of the comments here would apply equally.

If you've built some intermediate kits, you should be ready for this type of real craftsman kit. All it takes is a little care, a moderate assortment of good hand tools (modeler's knife, razor, saw, HO scale rule, needle nose pliers, and a screwdriver), and a few evenings of time. The result should be an outstanding model well worth the $4.25 list price. The car will accept any type of coupler. JW.

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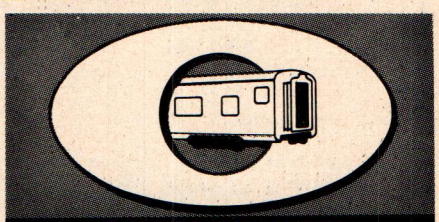

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TROUBLE SHOOTING

Conducted by Bill Schopp & RMC Staff

Questions for Trouble Shooting are welcome on any model railroad subject. Questions should be brief and to the point. We cannot undertake individual layout design work, nor can we recommend brands of merchandise. We will print those questions deemed of greatest interest to our readers. We will attempt to answer questions by mail when return post cards are included but cannot guarantee to answer all questions: Trouble Shooting, c/o RAILROAD MODEL CRAFTSMAN, 6 East Main St., Ramsey, N. J.

Beet Car Kits In O Scale

Several Readers: Who makes beer car kits in 0 scale. What types?

ANSWER: A partial list includes the following in 0 scale, subject to availability: Be sure to check the decal catalogs of *Champion Decal Co.*, Box 1178, Minot, North Dakota 58702 (catalog 50c ppd.), and *William K. Walthers, Inc.*, 1245 North Water St., Milwaukee, Wis. 53202 (catalog 50c).

All-Nation Line, P. O. Box 145, Des Plaines, Ill. pre-painted craftsman type kits (add 20% to prices listed or check with your 0 scale dealer): 36 ft. wood Schlitz, yellow, $5.95. 36 ft. Budweiser olive green, $5.95. 36 ft. Blatz yellow multi-color, $5.95. 36 ft. Miller High Life yellow, $5.95. Old timer kit (truss rods), $1.95. New catalog in preparation, will be announced, watch ads.

William K. Walthers, Inc., craftsman type kits with pre-painted silk screened sides or optional decals: Robin Hood Beer, $5.95.

Beer Reefers in HO

Many Readers: who makes HO beer refrigerator cars?

ANSWER: Here is a partial list. Also be sure to check out the decal catalogs of both *Champion Decal Co.*, Box 1178, Minot, North Dakota 58702 (catalog 50c ppd.) and *William K. Walthers*, 1245 North Water Street, Milwaukee, Wis. 53202 (decal catalog 50c).

Model Die Casting: P. O. Box 926, Hawthorne, Calif. 50 ft. plug door prepainted plastic kit with zamac floor, modern type: Millers High Life, $3.10.

William K. Walthers, Inc.: 1245 North Water St., Milwaukee, Wis. 53202, 40' wood, craftsman kit: Robin Hood Beer, yellow plus colors, $3.65 kit; also unlettered yellow with decal choice, $3.65 kit.

Main Line Models, P. O. Box 250, Falls Church, Va., 36' wood, craftsman type kits silk screened: Budweiser Beer, olive with white, Schlitz Beer, yellow with black, Pabst Beer, yellow with black, Canada Dry

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NWSL W3, MG RG 4-6-6-4, Gem Big Boy, C&O J3a. Many others in stock, some ready to ship.

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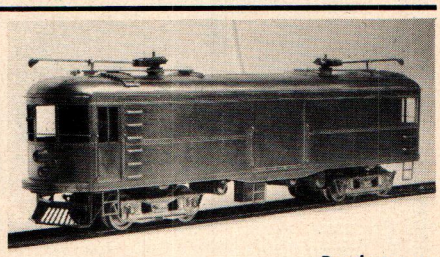

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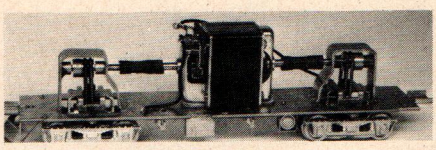
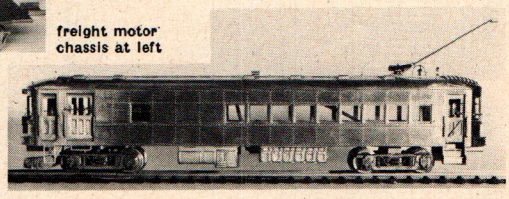


freight motor chassis at left

INDIANA RAILROAD RPO

A familiar contemporary is the HO IRR 375-7 series heavy-weight RPO passenger car.
Ready to run.
2052 ..... $29.95



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STEAM . . . HOn3 Steam Dummy coming — HO version (3526) on hand for **$19.50**
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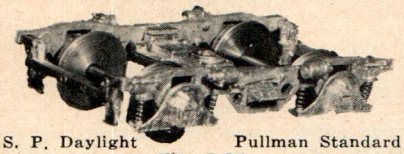

S. P. Daylight Pullman Standard
Kit: 5.95

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33" wheels—plain or oxidized.....Set 50c
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24-pg. **Structure & Bldg. Materials Catalog.** Illustrated, plus modeling information, **50c**
1965-66 28-pg. **Interurban Modeling Catalog.** Prototype & Overhead Wire Info., **50c**

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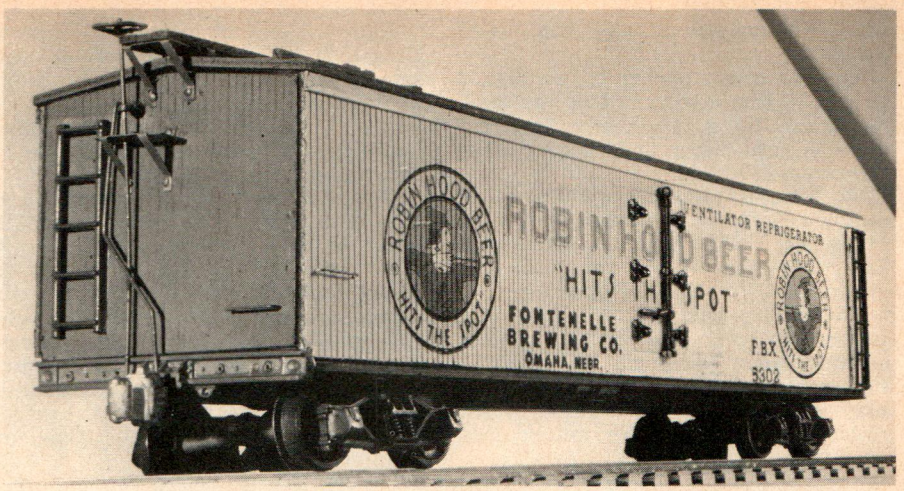


Ginger Ale; all $3.45 kit.

Howell Day (Red Ball), P. O. Box 301, Dunellen, N. J.: 33 ft. to 42 ft. wood, craftsman type kits with printed and scribed sides, subject to availability; Robin Hood Beer, grey with 4 colors; 42 ft. Blatz, $2.20; 41 ft. Coors, $2.20; Sonoma Wine (silver), $2.35; 40 ft. Narragansett Ale, $2.35; 36 ft. Canada Dry, $2.25; 40 ft. Goetz Brewing, $2.25; 40 ft. Robin Hood Beer (grey), $2.25; 33 ft. Guzlit (freelance fictional), $2.35; 36 ft. Schlitz, $2.20: 40 ft. Elwoods Root Beer, $2.15; 36 ft. Pabst Beer, $2.20; 36 ft. Cliquot Club (grey), $2.10; 36 ft. Cliquot Club 6 (green), $2.10.

Athearn Inc., 11929 S. Western Ave., Los Angeles, Calif. 90047; 50 ft. plug door molded plastic kit, RP-25 wheels: Pearl Brewing, $1.98. At your local dealer only. Also old stock, Blatz Beer, $1.89 kit.

S Gauge and Standard Gauge

Woodrow W. Lavender: Is the American Flyer "S" gauge and the term "Standard Gauge" seen in your magazine the same thing?

ANSWER: No. Standard Gauge trains are today primarily items for collectors, having a track width of 2-⅛" and are roughly made to a scale of 7/16". The big toy train makers stopped standard gauge production prior to World War 2. Some scale parts and kits are offered today from Model Engineering Works.

S gauge trains have a 7/8" track gauge and a scale of 3/16". Some locomotives and car kits are available from suppliers other than Gilbert. Suggest you study both our Dec. 1964 Train Set Directory and our 200-odd Loco Builders Photos for an idea of what is available in S Gauge. And check the ads carefully in every issue.

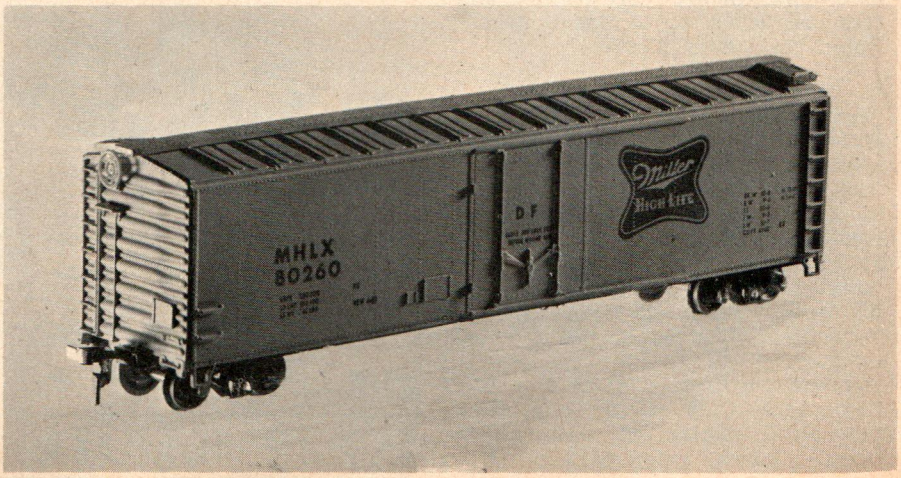
Streamlined Passenger Cars In O Scale

S. R.: Who makes streamlined passenger cars for 0 scale? I'm especially interested in smooth side cars.

ANSWER: Streamlined 0 scale passenger car kits are commercially available from the following sources:

Boxcar Ken, P. O. Box 5271-C, Metropolitan Station, Los Angeles, Calif. 90055. Both fluted side with smooth roof and smooth side, smooth roof types. 79 ft. cars smooth or fluted include postal, baggage, baggage-coach, coach, diner, lounge. Also fluted only in four SP Daylight cars. Also four smooth 85 ft. Pullman cars: 5-bedroom 10-roomette, 13 bedroom, 4-compartment 4 bedroom 2-drawing room, and 6-section 6-roomette 4-bedroom. All above kits $10.95 less trucks, couplers, and decals. Two fluted Daylight diners in 3-unit ($29.95 kit) and 2-unit coaches ($19.95) also offered. Specially customized window arrangements in either type available at extra cost.

William K. Walthers, Inc., 1245 North Water St., Milwaukee, Wis. 53202, offers an extensive line of



smooth side cars too involved for a complete listing (see latest 0 catalog, $1.00). Includes (all $ .95) postal, baggage club, coach, diner, bedroom, section sleeper, tavern, coffee shop, 3-unit articulated diner ($26.50), observation ($9.95). Following are $9.95 kits: coach, lightweight lounge. Original arch window Hiawatha cars: diner ($8.95), coach ($8.95), beavertail obs. ($12.50). Also eleven different Olympian Hiawatha cars most at $8.95: mail, baggage-dorm., mail-express, express, diner, coach, parlor, lunch lounge, tourist lounge ($9.95), observation ($9.95), and super dome sides only at $1.95 pair.

Also from Walthers a number of modernized cars including Pennsy . 80 ft., Erie or Erie-Lackawanna coach and diner, Great Northern coach, and combine. Modernized kits are $8.95 except Erie coach and combine which are $9.95 .

Walthers also offers custom building and other special services. Check catalog for prices.

Kemtron, P. O. Box 1952, Fresno, Calif. Complete line of streamlined passenger cars. Consult current 0 gauge catalog for prices and availability.

Shorty cars are offered in most types by Boxcar Ken and Walthers. Check catalogs regarding prices and availability.

NMRA: What It Is

B. J.: What is the NMRA. What do you get out of joining?

ANSWER: NMRA stands for National Model Railroad Association, Inc., having headquarters at P. O. Box 1328-C, Station C, Canton, Ohio 44708. Annual dues are $5.00 per year. NMRA was instrumental in bringing about the standards in our various gauges permitting positive interchange of equipment between manufacturers and modelers as they visit other layouts. NMRA also issues a monthly bulletin, a yearbook listing all members, assorted data sheets, and other literature.

NMRA is broken down into nine regions with some regions having local divisions. Activities include biyearly regional meets and an annual national convention. Convention activities include model contests, drawbar pulls, clinics on how-to, and more. There are also railette activities.

3-Rail HO

W.U.: Does anyone make HO equipped for three rail operation, eliminating 2-rail problems?

ANSWER. Yes, but its all imported. Prime producer is the giant German Maerklin firm, offering both U. S. and Continental train designs. Some other European firms also produce equipment that will operate on Maerklin track. See ads in RMC for suppliers.

All standard 2-rail HO can also be equipped to operate from 3-rail track. We would recommend the procedure only for those operating

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prototypical outside third rail equipment or electric locos using trolley wire or catenary.

0-6-0 Camelback

G. D.: Where can I purchase a model of the 0-6-0 camelback switcher shown on p. 39 of May '65 RMC, as used by BO on Staten Island Rapid Transit lines.

ANSWER: None is on the market. You'd have to build if you wanted an exact model, either from original plans if obtainable or from photographs. It is also possible to take a kit or RTR 0-6-0 switcher and modify it, even to the extent of a new superstructure. This might be a good place to start such work since you would be assured of a good running gear.

Lead Truck Trouble

P. M.: My Civil War mogul (2-6-0) has a lead truck that drags on the ties and gets caught on the switches. Do you know how to fix this?

ANSWER: Are the wheels revolving? If not, work them free and lubricate the axle. Are the wheels in gauge—dropping down between the rails or outside the rails? If not in gauge, press them in or out as needed. It also occurs to me that your track may not be put together tightly, making wheels bounce off. I once had another engine similar to this and found that somehow or other the lead truck had been put on upside down!

Magnifying

W. McI.: Even though I had new glasses prescribed a few months ago, I still have some difficulty in getting the clear vision of the small parts and fine work I would like to do in modeling. Do many modelers use aids to vision such as magnifiers of various kinds, or is this considered "chicken"?

ANSWER: Many modelers who build, assemble, modify or detail trains do, particularly in HO gauge and smaller. It is possible to assemble the average kit without magnifier of any kind, but to "get right down in there" and see what is what, you need some kind of aid. In spotting and drilling a tiny hole, a magnifier is a great aid. Nothing chicken about it.

There are several makes of binocular magnifiers on the market, offering several different strengths each. These focus at definite distances from the eyes, the closer the more powerful. Distant vision is obtained by looking out from under, or flipping the hood up. (If you wear bi-focals, a need to look beyond the range of the close-up part will necessitate flipping up the hood).

Monocular magnifiers are called loupes and are used by watchmakers and jewelers. If you wear glasses, a loupe can be clipped to the frame to flip up and down as you will. If you don't wear glasses, a plastic loupe need not be squinched in the eye-socket but may be held by a piece of spring steel around the back of the noggin. The one advantage of the loupe is that if you learn to keep the other eye OPEN too, you can use that as well as peripheral vision around the "louped" eye to look nearby as well as at a distance.

Scale Cars For Tinplate Track

Several Readers: Where can I get scale freight cars for use on tinplate track?

ANSWER: Suggest you send for catalogs of the various 0 scale manufacturers, including the following: All-Nation Line, P. O. Box 145, Des Plaines, Illinois (new catalog now in preparation but may be some months before it is ready.) A-N does have freight car kits available with tinplate flanges and couplers to match Lionel.

Also Boxcar Ken, Box 5271-C, Metro Station, Los Angeles 55, Calif. Boxcar Ken's catalog sells for $1.00.

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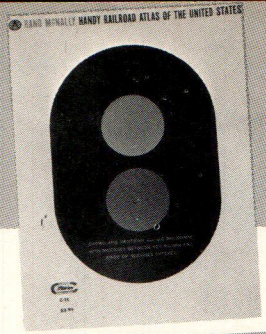

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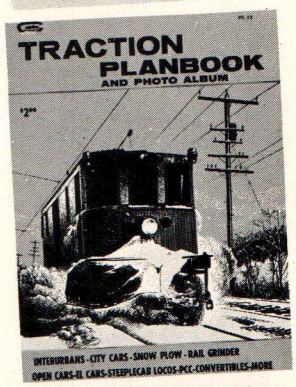

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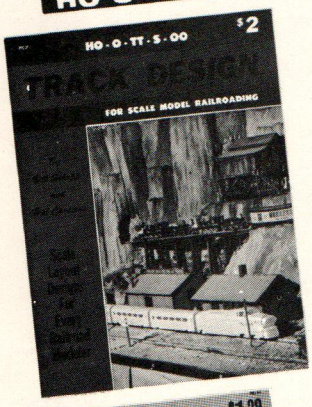

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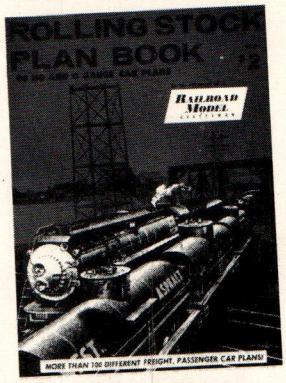

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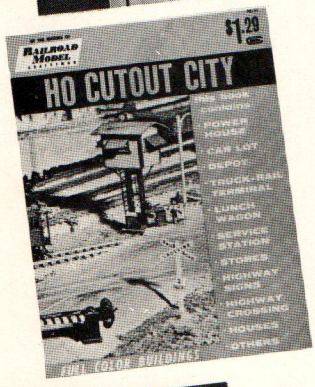

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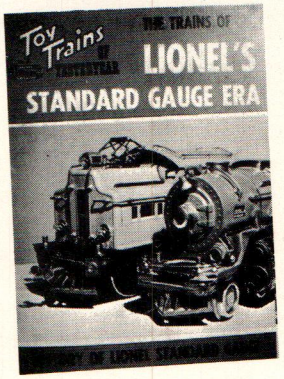

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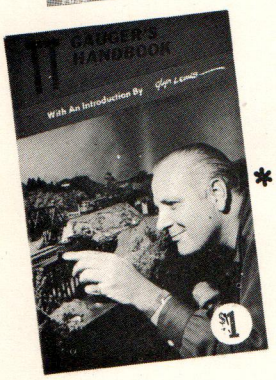

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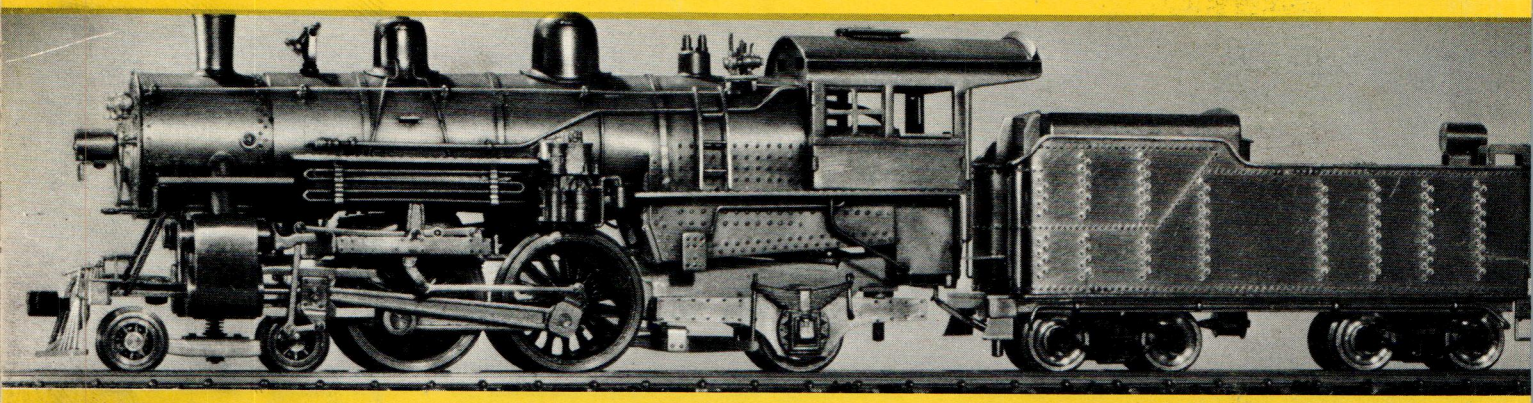

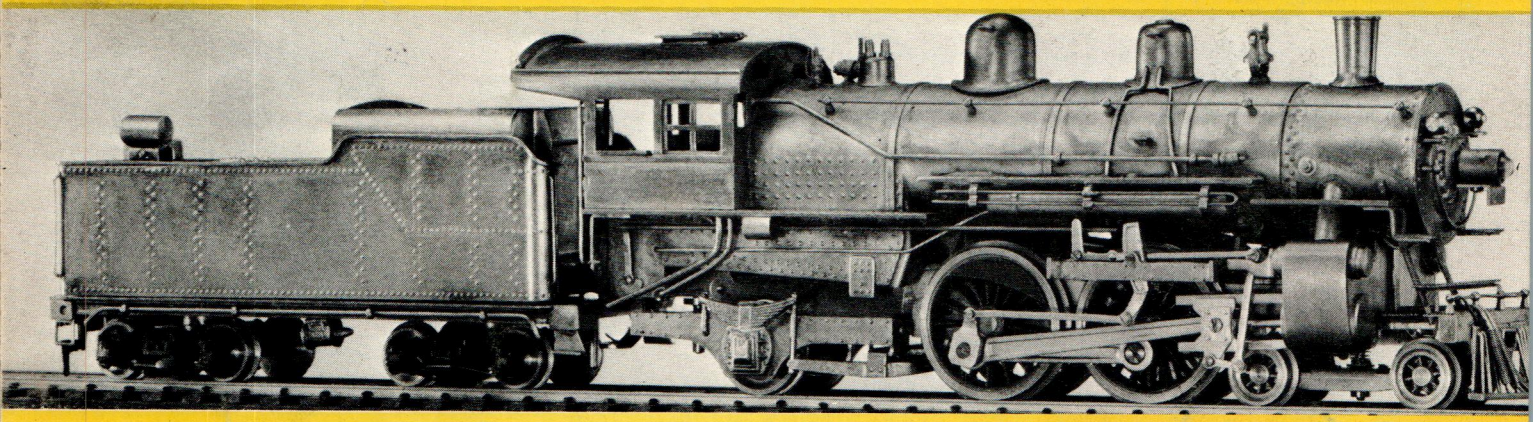

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